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ABSTRACT

The first of four issues in this volume consists of four review articles. "Tech Prep Quality" reviews a guide to total quality management and tech prep. "Specific, Ocean to Ocean" reviews a publication that identifies 10 preliminary plans for implementing tech prep. "...No Single Option" is about a monograph that evaluates tech prep and other current initiatives in terms of their value to the middle 50 percent of students. "Tech Prep Nat Sat Telecon" reports on a satellite teleconference that explored leadership, marketing, and business involvement in tech prep. Issue 2 begins with "Authentic Assessment," a review of authentic assessment practices. "Collecting Alternative Approaches to Assessment" focuses on alternative systems of assessment that address reform directives and new approaches to vocational education. "Let Me Get This Straight" looks at study results of local institutions who are trying to understand what Perkins accountability mandates really mean. "Accountability" summarizes two National Center for Research in Vocational Education (NCRVE) reports--one that develops a model of accountability and another that proposes policy alternatives in response to federal legislation. Issue 3 contains four articles. "An Annual Report on School-to-Work Programs" reviews an NCRVE report of the research conducted on successful education-to-work transition approaches. "Dive Right In!" explores work-based learning for medical unit secretaries. "Special Populations and More" reviews publications addressing two school-to-work connecting activities areas--special populations and gender equity. "Revising Educational Assessment" reviews two items about accountability and assessment. Issue 4 begins with "The Right Instrument," a review of the guides to two tools to assess leadership performance. "Administrative Breakwater" reviews a professional development simulation. "In Cases..." focuses on a collection of case studies for leadership development. "For Those about To Lead" reviews a leadership development curriculum. "A Source of Resources" assesses a publication that provides detailed information about leadership development resources. (YLB)

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NCRVE Change Agent
Shaping the Future of Vocational Education

Volume 4

National Center for Research in Vocational Education
Berkeley, CA

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FOCUS ISSUE: Tech Prep

NCRVE Change Agent

SHAPING THE FUTURE OF VOCATIONAL EDUCATION

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ABOUT NCRVE

NCRVE is established under authorization of the Carl D. Perkins Vocational Education Act to engage in two vocational education-related activities: (1) applied research and development and (2) dissemination and training. Our mission is to address the goals of preparing individuals for substantial and rewarding employment and of acting as a catalyst for a shift to an economy dominated by a skilled and flexible workforce. NCRVE is a consortium of educational institutions led by the University of California at Berkeley's Graduate School of Education. This consortium also consists of the Teachers College at Columbia University, the University of Illinois, the University of Minnesota, RAND, Virginia Polytechnic Institute and State University, and the University of Wisconsin at Madison. In addition to its research and development agenda, NCRVE supports five dissemination and training programs: (1) dissemination; (2) professional development; (3) special populations; (4) planning, evaluation, and accountability; and (5) program development, curriculum, and instructional materials. This publication is part of our commitment to those on the front lines of vocational education, striving to create a new vision.

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TECH PREP QUALITY
A TQM Approach to Tech Prep

Tech Prep is a burgeoning educational reform initiative—perhaps the most significant secondary and postsecondary educational initiative to develop in the United States in recent years.

Implementing Tech Prep: A Guide to Planning a Quality Initiative by Debra D. Bragg provides perspectives on Tech Prep from personnel representing state agencies and many local consortia in each of the fifty states. Many of the individuals whose perspectives are collected in *Implementing Tech Prep* have been involved in the initiative since before the passage of Perkins II, the Carl D. Perkins Vocational and Applied Technology Act Amendments of 1990, a part of which is the Tech Prep Education Act.

As the introduction to the guide points out, establishment of the Tech Prep initiatives of Perkins II is an effort to confront a myriad of serious and fundamental educational and economic concerns, including the following:

- Schooling lacks meaning for a large proportion of high school students, often referred to as the neglected majority.
- America's educational system fails to efficiently transition many young people from high school to work or to further education.
- Technically demanding occupations are growing at a faster rate than America's technically skilled workforce.
- The United States is competing in a global marketplace where foreign competitors' workers are more highly trained and productive than its own.

"Tech Prep is seen as a potential solution to these problems," Bragg and other proponents of the initiative contend, "because of its comprehensive, applied, and technologically-rich approach to blending secondary and postsecondary education for employment."

Implementing Tech Prep is a practical guide, first, because many of the ideas in it have their source in successful examples of Tech Prep implementation throughout the country and in a variety of other initiatives in education as well as business and industry. Consequently, *Implementing Tech Prep* presents a potential approach to Tech Prep that has the fundamentals of Total Quality Management (TQM), an initially business-oriented but now expanding initiative, as its foundation. At the same time, however, contributors to the guide claim that the guide "is not a cookbook advocating only one approach. Rather, it considers new ways of thinking about the educational innovation promised by Tech Prep"—prominent among them, an approach based in the similar TQM initiative. *Implementing Tech Prep* considers first the nature of traditional educational reform approaches and Tech Prep's relation to them then explores the similar principles and procedures

The Total Quality Management approach to implementing Tech Prep seems a reasonable and well-founded one

associated with both Tech Prep and TQM, showing how the two initiatives complement one another in developing comprehensive Tech Prep programs.

Implementing Tech Prep is a practical guide not only for its content, but also for its format. The guide was written using techniques of the Information Mapping® method, a writing system that employs the use of essentially self-contained, modular units and blocks of text that, as the guide indicates,

> enable a reader to choose information that is needed without having to sort through pages of text. . . . And, because it is easy to find information and move through the document in ways that make sense to individual readers, it is also easier to learn and relearn information.

Reading time for documents written using Information Mapping®, the guide reports, is reduced by as much as 40%.

Hence, *Implementing Tech Prep* presents a great deal of information about planning and implementing Tech Prep and presents that information in an easy-to-use format: "I've received very positive comments about the formatting of the document from practitioners," Bragg reports. "They think it is quick and easy to use."

After an introductory chapter, *Implementing Tech Prep* begins by providing a historical perspective for Tech Prep initiatives. Tech Prep, according to Bragg and chapter coauthor Carolyn J. Dornsife, has its origins in a long-standing debate among educators and policymakers that addresses two questions:

1. What is the appropriate role and function of job training and vocational education as part of the nation's public education system?

2. What are the educational consequences of technological change in the workplace?

Implementing Tech Prep traces the concept of Tech Prep, its variations, and its successes from legislation such as The Manpower Development and Training Act of 1962, through the reform strategies of the 1980s, and beyond Perkins II, which in 1990 formally defined Tech Prep as an education program that

- leads to an associate degree or two-year certificate
- provides technical preparation in at least one field
- builds student competence in mathematics, science, and communication through sequenced coursework
- leads to placement in employment

In the 1990s, schools are struggling to better educate more students by using resources more effectively. Though one of the more ambitious, Tech Prep is one among several reform options. In *Implementing Tech Prep*'s third chapter, Dornsife discusses the need for accepting the reality of reform; Tech Prep and the four aspects of educational restructuring (curriculum and instruction, authority and decision making, staff roles, and accountability); and the challenges to and federal support for Tech Prep implementation.

Chapter Four of *Implementing Tech Prep*, "Initiation of Tech Prep by the Fifty States," is based around a study conducted by NCRVE to document the initiation of Tech Prep in the states by local consortia. Like the study itself, Bragg and James D. Layton

This is a practical guide not only for its content, but also for its easy-to-use format

concern themselves in the chapter with the state grant funding of the consortia that became effective with Perkins II in July 1991 as well as the predominant philosophies, policies, and components of initial state Tech Prep initiatives. After reviewing the study, Bragg and Layton draw some implications from its findings—specifically, implications about resources (time, staff, and money), guiding philosophy, program evaluation, and the role of community colleges. "Whether [Tech Prep] will ultimately succeed or fail depends on the degree to which current problems are solved and surmounted," the authors conclude.

Another study conducted by NCRVE personnel, this one as part of the *Implementing Tech Prep* project, informs the "Planning & Implementation of Tech Prep by Local Consortia" chapter of *Implementing Tech Prep*, which describes how individual organizations (mostly consortia and community college service regions) have begun to plan and implement Tech Prep. The chapter discusses aspects of Tech Prep planning and implementation such as definition and strategy setting, consensus building, selection and orientation of planners, consortium-level planning, wide-scale orientation and recruitment, and initial implementation. Identified by the study were a number of critical purpose- and process-oriented issues, including clarity of purpose, high school tracking, vocational education control of administration and funding, resource needs, leadership development, flexibility in implementation and evaluation, establishing meaningful partnerships, and maintaining momentum. Each issue is discussed in detail in the chapter.

It is at this point in *Implementing Tech Prep* that a discussion of Total Quality Management (TQM) is integrated with the discussions of Tech Prep. The contributors' integration of TQM and Tech Prep are based largely on parallels between the two: reforming and improving systems, empowering teams representing a variety of stakeholders to make improvements, and using measurements as the basis for all continuous quality improvement efforts. The sixth chapter of the guide explores TQM principles; quality theories; and finally, implications of TQM for Tech Prep implementation in the areas of leadership, vision, goals, resources and training, measurement, performance review, rewards for quality improvement, and the challenges of applying TQM to Tech Prep. The challenges for the TQM-Tech Prep synthesis Bragg explores are extrapolated from the difficulties other business and educational institutions have encountered in applying TQM in their situations, though she warns that "it is impossible to predict every challenge that could stand in the way of using TQM to implement Tech Prep."

Catherine L. Kirby and James D. Layton's brief "Implementing Tech Prep with Teams" chapter attempts to reinforce the need for effectively employing teams to accomplish the Tech Prep mandates of Perkins II and provides a transition into the more extensive eighth chapter, "How to Use Group Processes and Quality Tools." While Chapter 8 is intended as a mere introduction to some of the techniques and tools used in TQM team functions, Layton refers readers to a set of additional resources. The references provide the details of group techniques and quality tools of which those listed in the chapter—multivoting, action planning, benchmarking, and computer-assisted group techniques among them—are but a few examples.

Tech Prep is perhaps the most significant educational initiative in the United States in recent years

The final chapter of *Implementing Tech Prep* summarizes the guide and provides an outline of an approach to implementing Tech Prep by applying eight essential prerequisites for strategic quality management:

1. gaining support from leaders
2. creating a shared quality vision and policies
3. formulating and prioritizing quality goals
4. deploying goals throughout a consortium
5. providing necessary resources, including training
6. stating desired outcomes and establishing measures
7. reviewing performance regularly
8. revising the reward system

Treatment of each prerequisite includes goals, planning activities, team roles, tools, and outcomes.

In addition to summarizing the fifty-one-state survey results and acknowledging the NCRVE Tech Prep research sites, the appendices of *Implementing Tech Prep* briefly outline steps for successful articulation of students within Tech Prep programs.

The Total Quality Management approach to implementing Tech Prep established in *Implementing Tech Prep: A Guide to Planning a Quality Initiative* seems a reasonable and well-founded one. The synthesis of these two innovative initiatives—as well as the Information Mapping® format in which it is presented—deserves consideration by educational systems responding to the Tech Prep mandates of Perkins II. Final decisions about how to implement Tech Prep remain, of course, with state agencies and local consortia.

Implementing Tech Prep: A Guide to Planning a Quality Initiative (MDS-241) was prepared by Debra D. Bragg from the NCRVE site at the University of Illinois at Urbana-Champaign. (For ordering information, see page 12.)

SPECIFIC, OCEAN TO OCEAN
Ten Plans for Integrated Tech Prep

The excerpt below is from the preface of the brand new Establishing Integrated Tech Prep Programs in Urban Schools: Plans Developed at the NCRVE 1993 National Institute, *one in a series of NCRVE Technical Reports. As the excerpt indicates,* Establishing Integrated Tech Prep *contains ten preliminary plans for implementing Tech Prep in high schools and affiliated community colleges in ten U.S. cities: Washington, DC; Cleveland, Ohio; Las Cruces, New Mexico; St. Paul, Minnesota; Philadelphia, Pennsylvania; Tuscaloosa, Alabama; Detroit, Michigan; Oklahoma City, Oklahoma; Raleigh, North Carolina; and Baltimore, Maryland.*

As a nearly 500-page anthology of comprehensively devised plans, Establishing Integrated Tech Prep *provides Integrated Tech Prep program planners with a tremendous "volume" of specifics.*

The National Center for Research in Vocational Education (NCRVE) held its third National Institute, "Establishing Integrated Tech Prep Programs in Urban Schools," in Berkeley, California, July 14-23, 1993. Ten teams of vocational and academic educators—125 high school and community college teachers, counselors, and administrators—from ten major metropolitan areas, selected through a competitive application process, participated in this institute. Each team was aided by a representative of its state department of education. Several teams were also assisted by local business partners. Also working with each team were two mentors—an expert practitioner and a graduate student. Speakers, panel discussions, breakout sessions, and role play exercises were all part of the institute experience. In the course of the intensive two week program, each team was charged with the responsibility of developing a strategic plan for initiating or continuing the development of an Integrated Tech Prep program within its institutions.

The Carl D. Perkins Vocational and Applied Technology Act of 1990 (Perkins II) mandated the integration of vocational and academic education as prerequisite for other funding, including funding through the Tech Prep Education Act. By enhancing academic competencies in vocational programs and making academic curricula more accessible to all students, the integration of vocational and academic education has become a vital component of all successful Tech Prep initiatives. Strong Tech Prep initiatives can make powerful contributions to building student competence in academic areas and vocational-technical fields. Through collaborative, articulated efforts between secondary and postsecondary institutions, these programs smooth the transition from school to work by providing students with high quality workplace skills.

Perkins II also addressed the needs of disadvantaged youth, especially those in urban areas, by targeting funding to areas of poverty and special needs. As a result, many large cities have received substantially increased federal funding. Unfortunately, many urban recipients lack the technical information to plan and implement successful programs. Developing workable strategies to create better schools for students requires an understanding of the issues; a commitment from the leaders; and the support of superintendents, administrators, teachers, and business. Creating such strategies was a major goal of the 1993 Institute.

If the Integrated Tech Prep planning effort is to be successful, it must effectively involve the entire community

The 1993 Institute built upon and was strongly influenced by [NCRVE's] work with twenty urban school teams who took part in NCRVE's first two Institutes in the summer of 1992 and with whom [NCRVE] has developed its Urban Schools Network. Monitoring site visits, discussion at regional meetings, progress reports, and end-of-year evaluations from these teams helped [NCRVE] to refine . . . , refocus, and reshape the 1993 Institute. The active participation and ample feedback provided

by the participants in [the] Urban Schools Network was vital to its success. The 1993 Institute participants now join the Urban Schools Network, which encourages exchanges of information between those with extensive experience in various program areas and others just beginning to learn about them. During the year, NCRVE sponsors regional meetings at which network teams can visit model programs, assess their own progress, and plan future steps. [NCRVE's] ultimate goal is the development of a practitioner "owned" reform movement within vocational education, one that is organized in school and communities but coordinated and supported on a national level.

[*Establishing Integrated Tech Prep*] is comprised of ten planning documents developed at the 1993 Institute. It is important to note that these planning documents represent a culminating activity of the 1993 Institute and are not the final Integrated Tech Prep plans for any of the institutions involved. [NCRVE is] acutely aware that if the Integrated Tech Prep planning effort is to be successful, it must effectively involve and engage the entire community involved with Tech Prep and that the effort must be an ongoing, incremental process [that] will continue long after the institute is over. [NCRVE] trusts that these plans will form a substantive basis for the required consultation process which will take place in the coming months.

[NCRVE's] intent in publishing these documents is to assist other community college and high school planners who are initiating or enhancing their own Integrated Tech Prep programs by providing specific examples of plans designed for urban areas. [NCRVE is] pleased by the high quality of the ideas set forth in these plans and are proud to have been associated with the teams which produced them.

Establishing Integrated Tech Prep Programs in Urban Schools: Plans Developed at the NCRVE 1993 National Institute (MDS-770) was compiled at the NCRVE site at the University of California at Berkeley. (For ordering information, see page 12.)

. . . NO SINGLE OPTION
Assessing Tech Prep and Other Educational Reforms on Behalf of the "Excluded Middle"

The authors of *Building the Middle*—Sue E. Berryman, Erwin Flaxman, and Morton Inger—bill their monograph as an "interpretive synthesis" of NCRVE research about educational reforms concerning the preparation of students for postsecondary training and work:

> Work preparation traditionally has been thought of as the venue of students not able to do rigorous academic work—those not bound for college—but we have learned that the cognitive principles of work-related education are the foundation for the learning necessary for both further academic education and success in a changing workplace at all job levels. We strongly feel that the nation needs to objectively examine the various proposals for work preparation, some already implemented, to build an educatively powerful training *system* for students, not just a patchwork of different programs, not one of which meets the basic criteria for positioning students for middle-skill jobs.

While the authors acknowledge the contributions of non-NCRVE research on a broad work preparation system and urge readers to consider their monograph alongside such research, they intend for *Building the Middle* to present NCRVE research as "a coherent and unified body of knowledge" capable of contributing to the design of a comprehensive, national work preparation system. The reform initiatives identified from NCRVE research for evaluation are cognitive apprenticeship, Tech Prep, integrated vocational and academic education, vocational education as part of general education, career magnet schools, academies, work-based youth apprenticeship, cooperative education, and school-based enterprise.

A comprehensive system of work preparation is the proposed solution to a two-pronged problem: On the one hand, the American economy does not reward low skills with middle-level wages as it once did; on the other, the American education system—which "now takes seriously the education of only the top ten or twenty percent" of K-12 and postsecondary students—is "missing the middle," providing no coherent educational strategy for students who complete high school but are unable to complete college or the training necessary to enter middle-level jobs. The proposed solution—building the middle—requires the involvement not only of schools, but of employers as well: it requires integrating "the demand and supply sides of the equation":

> Building the middle requires changing many pieces of the American education and training system—its curriculum; pedagogy; organization of time; assessment practices; technology; the skills and knowledge of its teachers; and the relationships among K-12, postsecondary education, and workplaces, and among academic teachers, vocational teachers, learners, and employers.

Building the Middle specifies seven design criteria for evaluating initiatives, identifies the defining characteristics of each initiative, clarifies the similarities and differences among the initiatives currently being considered, discusses the strengths and weaknesses of each initiative in meeting the proposed design criteria, and identifies barriers to the adoption and diffusion of each initiative. Coupled with the variety of reform initiatives considered, it is especially these analyses that make *Building the Middle* a valuable resource.

The authors of *Building the Middle* develop their seven design criteria with the overall educational objective of creating learning arrangements that are "so highly motivating and so effective that all students develop the knowledge and skills needed for at least middle-skill and middle-wage jobs." The criteria define what the authors see as essential elements of a comprehensive work preparation system. An initiative contributes to the solution of building the middle, according to the authors, if it accomplishes the following:

1. sets up educationally rich and problem-rich learning activities that reflect the knowledge demands of the work contexts in which knowledge and skills have to be used
2. creates a "community of expert practice," where the adults do more than talk about the practices of that community and play the role of subject-matter coach during the learning process
3. develops knowledge and skills efficiently
4. engages employers in curricular design, the creation of work-experience positions, and commitments to hire the program's graduates
5. makes the relationships and tradeoffs between different training investments transparent for students
6. is designed to prevent its being captured by the more advantaged or abandoned to the less advantaged
7. can potentially scale up into a national system that prepares students for middle-skill and middle-wage jobs

No single initiative meets *Building the Middle*'s proposed design criteria

The monograph's assessment of the reform options it considers is substantial and, for all practical purposes, requires firsthand consideration on the part of educators, policymakers, and others interested in

The cognitive principles of work-related education are the foundation for the learning necessary for both further academic education and success in a changing workplace

developing a comprehensive, national solution to the problem of the "excluded middle." The monograph warns that building the middle "will require an intelligent and efficient infrastructure to support the process"; briefly, they propose infrastructure changes in the areas of quality assurance, curricula, professional development, and knowledge transfer.

Ultimately, *Building the Middle* concludes that no single option meets the proposed design criteria. Instead, the monograph's authors propose a solution that integrates the pedagogic and curricular principles of cognitive apprenticeship, the organizational elements of vocational and academic integration, the articulation and occupational cluster principles of Tech Prep, and the rigorous skills certification of work-based apprenticeships.

A brief overview of *Building the Middle—Building the Middle: Executive Summary*—is also available separately from the NCRVE Materials Distribution Service.

Building the Middle (MDS-408) and *Building the Middle: Executive Summary* (MDS-409) were prepared by Sue E. Berryman, Erwin Flaxman, and Morton Inger from the NCRVE site at Teachers College, Columbia University. (For ordering information, see page 12.)

TECH PREP NAT SAT TELECON
Leadership, Marketing, and Business Involvement in Tech Prep . . . via Satellite

Involving Key Players in Tech Prep is a videocassette recording of one in a series of 1992 NCRVE National Satellite Teleconferences. The teleconference series, "Breaking the Mold: Tech Prep and Integration of Academic and Vocational Education," explores the Tech Prep and integration of vocational and academic education reforms and includes three other videoconference recordings: *Laying the Foundation for Integration*, *Building Teams for Tech Prep*, and *Achieving Integration Through Curriculum Development*.

The one and a half hour *Involving Key Players* teleconference, which took place on December 15, 1992, was broadcast live via satellite from Virginia Polytechnic Institute and State University to participants at downlink sites across the United States and Canada.

Involving Key Players opens with a short address by Dale Parnell, Professor in the School of Education at Oregon State University, author of the seminal book *The Neglected Majority*, and one of the founders of the Tech Prep movement. In his overview, Parnell notes the apparently significant impact of Tech Prep programs on teaching and learning. He also emphasizes the notions that Tech Prep integrates content with context, vocational education with academic education, and that the reforms give attention to the majority of students—who are unlikely to complete baccalaureate programs—and improves the match between what students need for work and other life roles and what they are taught in school.

The teleconference was set up as a combination panel discussion and question call-in session. Joining moderator David Crippens of KCET-TV were panelists Julia B. Akers, Coordinator, Roanoke (Virginia) Area Tech Prep Consortium, and member of the Virginia Tech Prep Advisory Board; Stephen D. Spaar, Coordinator, Technical Division, T. H. Pickens Technical Center in Aurora, Colorado; Donald C. Garrison, President, Tri-County Technical College in Pendleton, South Carolina; and Carver C. Gayton, Corporate Director of College and University Relations, Boeing Company, Seattle, Washington. As

Tech Prep integrates content with context, vocational education with academic education

representatives of business and both secondary and postsecondary educators at various levels, the panelists brought a range of experience with the Tech Prep implementation process to the broadcast.

The objective of the teleconference was to share strategies for involving key players in Tech Prep

There are people in districts who can design Tech Prep initiatives that fit the needs of local communities

initiatives. Specifically, the teleconference addressed three questions:

1. Why is leadership an issue in Tech Prep?
2. How can Tech Prep programs be successfully marketed?
3. How can business and industry become involved in Tech Prep programs?

The balance of the first hour of the teleconference consisted mostly of panelists' reactions to three segments of prerecorded interviews with people in business and with administrators and faculty from various secondary and postsecondary institutions. In each segment—which addressed, respectively, the issues of leadership, marketing, and business/industry involvement—interviewees provided the details of their experience with Tech Prep and offered their opinions about the implementation and efficacy of Tech Prep programs.

The call-in questions during the first hour set the stage for involving participants at downlink sites more fully later in the broadcast.

Most of the last half hour of the teleconference was devoted to questions from viewers at the various down-link sites. Questions addressed the following issues:

- ways in which special populations are served by Tech Prep
- roles of industrial technology staff
- articulation of Tech Prep students to adult vocational centers
- disinvestments necessary for implementation of Tech Prep
- effects of Tech Prep on tracking
- teacher strategies for cultivating leadership, marketing programs, and involving business and industry for Tech Prep programs
- small business involvement in Tech Prep
- proven methods for involving business in Tech Prep
- role of the Principles of Technology and other applied academics programs in Tech Prep
- overcoming the mindset of having students complete four-year degrees
- preventing schools and consortia from whitewashing existing programs rather than establishing substantial Tech Prep programs
- employment of Tech Prep program completers
- place of humanities and social sciences in Tech Prep
- preparing students for college entrance examinations and in terms of postsecondary admission standards
- parent resistance to Tech Prep
- establishing Tech Prep competencies and performance standards
- matching the requirements of and credits awarded for Tech Prep programs with four-year college and university admissions requirements
- contacting businesses about their involvement in Tech Prep
- involving community college faculty in Tech Prep

- changes in technical core areas as a result of Tech Prep
- expectations of student performance
- the entrenched negative image of vocational education and vocational programs

In general, the questions and panelists' responses touched on a wide range of significant issues—most notably, many of the pivotal issues that proponents of Tech Prep have addressed and continue to address during the early years of the initiative's implementation.

Tech Prep improves the match between what students need for work and other life roles and what they are taught

Before closing the teleconference with a graphic review of some of the important points made during the teleconference, moderator Crippens asked the panelists to indicate the one thing they would or would not do if they had their Tech Prep programs to do over again. Below are their responses:

> I would involve . . . counselors more [in] the program than we did with the original 2+2 [program].
>
> —Julia B. Akers

> Communicating to . . . four-year institutions—I think we needed to do that.
>
> —Donald C. Garrison

> I think the major thing that we have to do . . . is to ensure that there are other businesses, other industries that are involved with regard to the process. . . . [Many people] see this as an educational program almost exclusively. . . . You don't see . . . many of the businesses that should be involved. And really, we do have to think about equal partners working together to achieve [what] Tech Prep is all about.
>
> —Carver C. Gayton

> [Beyond not] involving the entire community, . . . I would not . . . be so intimidated by the [big Tech Prep programs] that have been so successful, and fall back more on the resources that [we] have in [our] own districts and realize that [we have] professional, educated people in [our] districts [who] can design a Tech Prep model or initiative that fits the needs of the local community.
>
> —Stephen D. Spaar

NCRVE is committed to keeping educators up-to-date on Tech Prep and the integration of vocational and academic education. Additionally, NCRVE is interested in learning about exemplary programs that can be shared with others. If you know of an exemplary Tech Prep or integration program, please write to

Laurie Holland
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2150 Shattuck Avenue
Suite 1250
Berkeley, CA 94704

or call (800) 762-4093.

NCRVE is planning national satellite teleconferences for this year, but details are not yet available. For further information, call Susan Faulkner at (703) 231-7337 or Nora Hansen at (703) 231-5754, or contact them by e-mail at ncrve@vtvm1.cc.vt.edu. Both Faulkner and Hansen are from the NCRVE site at Virginia Polytechnic Institute and State University.

The videotape *Involving Key Players in Tech Prep* (MDS-467) was produced at the NCRVE site at Virginia Polytechnic Institute and State University. (For ordering information, see page 12.)

The videotape *Laying the Foundation for Integration* (MDS-464), *Building Teams for Tech Prep* (MDS-465), and *Achieving Integration Through Curriculum Development* (MDS-466) were also produced at the NCRVE site at Virginia Polytechnic Institute and State University. (For ordering information, see page 12.)

Coming in the June **Change Agent** . . .

Evaluating Vocational Education Programs and Students

An entire issue devoted to accountability and assessment

- Testing and Assessment in Secondary Education: A Critical Review
- Alternative Approaches to Outcomes Assessment for Postsecondary Vocational Education
- Pandora's Box: Accountability and Performance Standards in Vocational Education
- Local Accountability in Vocational Education: A Theoretical Model and Its Limitations in Practice
- Beyond Vocational Education Standards and Measures: Strengthening Local Accountability Systems for Program Improvement

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NCRVE Change Agent

Shaping the Future of Vocational Education

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ABOUT NCRVE

NCRVE is established under authorization of the Carl D. Perkins Vocational Education Act to engage in two vocational education-related activities: (1) applied research and development and (2) dissemination and training. Our mission is to address the goals of preparing individuals for substantial and rewarding employment and of acting as a catalyst for a shift to an economy dominated by a skilled and flexible workforce. NCRVE is a consortium of educational institutions led by the University of California at Berkeley's Graduate School of Education. This consortium also consists of the Teachers College at Columbia University, the University of Illinois, the University of Minnesota, RAND, Virginia Polytechnic Institute and State University, and the University of Wisconsin at Madison. In addition to its research and development agenda, NCRVE supports five dissemination and training programs: (1) dissemination; (2) professional development; (3) special populations; (4) planning, evaluation, and accountability; and (5) program development, curriculum, and instructional materials. This publication is part of our commitment to those on the front lines of vocational education, striving to create a new vision.

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AUTHENTIC ASSESSMENT
"This Is (Not Necessarily) a Test"

Testing and Assessment in Secondary Education: A Critical Review of Emerging Practices by Clifford Hill and Eric Larsen begins its comprehensive investigation of authentic assessment by situating such assessment in terms of the purposes of testing. Ultimately, the authors have discovered, while tests and other forms of assessment differ in the type of information they seek and in the kinds of decisions they support, all tests inform decision making.

In *Testing and Assessment*, Hill and Larsen describe one classroom-oriented purpose, or function, of testing—managing student learning—and two system-oriented functions—monitoring educational systems and evaluating students for institutional purposes. The practices represented by these functions, referred to as *traditional testing*, have played a role in education in the United States and throughout the world for the better part of this century. The multiple-choice test, referred to as *conventional testing*, has become the prototypical form of traditional testing. In recent years, however, educators have become aware of the reductionism perpetrated by conventional testing and have proposed alternative practices. Hill and Larsen refer to such alternative practices as *authentic assessment*, a term that

> conveys the notion that assessment should be built around tasks that are worth doing for their own sake. In determining intrinsic merit, educators derive standards from academic disciplines but, increasingly, from the larger society, as well. . . .
>
> Moreover, students are not expected simply to create discourse [verbal expressions, both written and oral]. . . . [A]uthentic assessment has developed tasks that go beyond the purely linguistic. Students are asked to make useful or pleasing artifacts . . . or to engage in performances. . . .

In addition, Hill and Larsen believe

> it is useful to extend the concept of authenticity to include the perspective of students who are asked to take part in an assessment activity. . . . Assessment should [also] be authentic . . . in the standards that are used in evaluating students. . . . [T]he standards that should be applied are those of practitioners . . . in various academic disciplines . . . [and] in the workplace.

In other words, fully authentic assessment has the following characteristics:

- The *tasks* of authentic assessment themselves have intrinsic merit.
- *Students* interact actively with the tasks prescribed by authentic assessment.
- Practitioners would consider the *standards* applied to student interactions valid.

With these three characteristics and their implications in mind, *Testing and Assessment* makes suggestions for improving the traditional scheme of testing and making it reflect authentic assessment.

At the end of the first major section of *Testing and Assessment*, Hill and Larsen define and challenge the testing paradigm itself, differentiating the subcategory testing from the broader category of assessment. As becomes clear in the explanation of the monograph's authentic assessment taxonomy (discussed below), testing does not equal assessment.

Tests have four features:

1. Test givers conduct tests in a single time frame of specified duration.
2. Tests consist of prescribed tasks that are presented in stable form.
3. Tests elicit individual responses not based on external resources.
4. Evaluators evaluate test responses according to a pre-established scheme.

The defining features of testing sometimes characterize examples of authentic assessment. However, Hill and Larsen go to great lengths to develop a taxonomy that makes a basic distinction between the practices of authentic assessment that remain within the testing paradigm and those that extend beyond it.

The authors devote the largest section of the monograph to a taxonomic overview of authentic assessment. In it, they present a set of heuristically oriented categories of authentic assessment in secondary education. Each mode of authentic assessment falls within one of two broad categories—*alternative testing* or *documentation practices*—established by the authors to differentiate between those that fall within the testing paradigm and those that "extend beyond" testing, respectively. Table 1 presents these categories hierarchically.

The final section of *Testing and Assessment* evaluates authentic assessment in terms of three principles frequently used in discussing testing and assessment policy: excellence, equity, and efficiency. The authors also introduce a new term, "ecology."

"Those who support authentic assessment," Hill and Larsen contend, "place the pursuit of excellence at the heart of their policies." In terms of excellence and in contrast to conventional testing, authentic assessment requires students to construct responses rather than select among preexisting options, elicits higher-order thinking from students in addition to basic skills, uses direct assessment of holistic projects rather than indirect measures, and gets integrated with classroom instruction rather than separated from it.

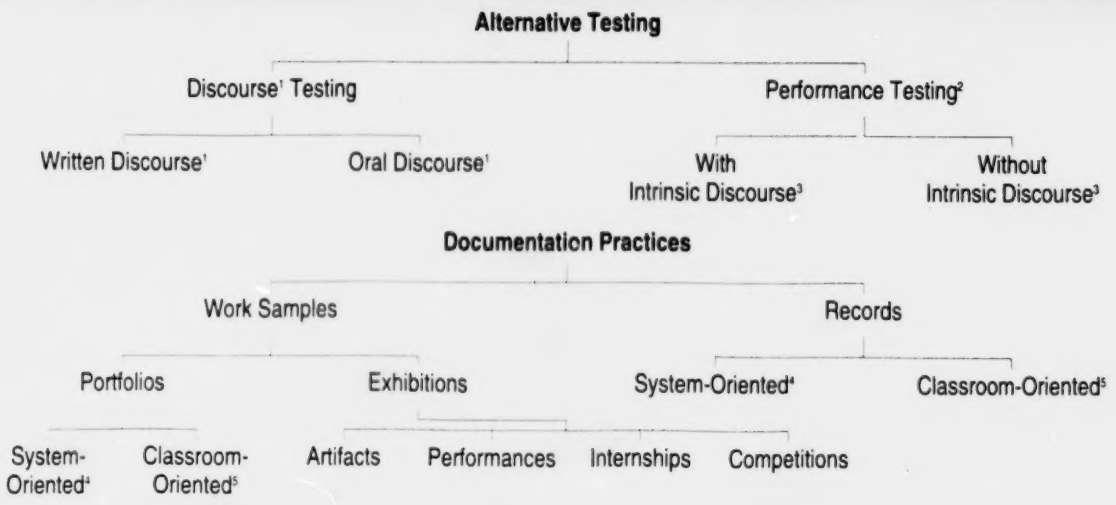
In terms of equity, educators who advocate authentic assessment claim that such assessment, which uses samples of student work collected over an extended period of time, defines clear criteria of which students are made aware, allows for the possibility of multiple human judgments, and more closely relates to what students learn in the classroom.

Its advocates consider conventional testing highly efficient for two reasons: (1) the multiple choice format, which reduces the amount of time for and cost of administering and scoring tests, and (2) the statistical techniques known as psychometrics, which facilitate the construction of tests and the interpretation of results.

Hill and Larsen, however, differ:

> From the standpoint of those who support authentic assessment, such notions of efficiency are superficial and misleading. It masks the massive inefficiency that arises in an educational system when fundamental goals are distorted by

Table 1. Taxonomy of the Two "Branches" of Authentic Assessment



[1] *Discourse* refers to verbal expressions, both written and oral (i.e., "questions" and "answers" in such tests are presented with words).
[2] *Performance Testing* elicits activity that goes beyond mere discourse.
[3] *Intrinsic Discourse* refers to discourse "built around tasks that are worth doing for their own sake."
[4] *System-Oriented* refers to testing that results from needs outside of the classroom.
[5] *Classroom-Oriented* refers to testing that relates to classroom needs.

> inappropriate methods of assessment. They thus argue for a deeper notion of efficiency, one that has to do with the degree to which assessment fosters good educational practices.

Hence, the authors "prefer a deeper notion of efficiency that can be expressed by the term 'ecology'"—a term that they use not only in place of *efficiency*, but in place of *excellence* and *equity* as well: "It conveys an overarching principle that forces [educators] to examine the complex role that assessment plays within the larger educational enterprise."

With this notion of ecology in mind, Hill and Larsen conclude their "assessment of authentic assessment" by focusing on the essential role authentic assessment plays in achieving three fundamental, or ecological, goals of education:

1. Reforming curriculum and instruction
2. Improving teacher morale and performance
3. Strengthening student commitment and capacity for self-monitoring

The *Testing and Assessment* monograph ends with a caveat and a vision:

> Authentic assessment, when compared to conventional testing, makes far greater demands on both students and teachers. Indeed, those who support conventional testing have argued that authentic assessment consumes so much time that instruction is inevitably shortchanged. This way of thinking misconstrues the symbiotic relation between instruction and assessment. Each, when done properly, becomes the other; . . . . If this clinical spirit is to be humanely achieved in our classrooms, the very structure of education must be transformed. Such a transformation depends not only on our vision of what education should be but on the resources we are willing to commit to achieving this vision.

Testing and Assessment in Secondary Education (MDS-237CA) was prepared by Clifford Hill and Eric Larsen from the NCRVE site at Teachers College, Columbia University. (For ordering information, see page 12.)

COLLECTING ALTERNATIVE APPROACHES TO ASSESSMENT

Traditional outcomes assessment in postsecondary vocational education has focused on outcomes that have routinely directed postsecondary vocational education programs—job placement, occupational competence, program completion or retention, and earnings. As is the case in other sectors of the U.S. educational system, however, forces both inside and outside postsecondary vocational education advocate reform. Amidst the calls for reform by employers, a plethora of commissions, and other groups, the Carl D. Perkins Vocational and Applied Technology Education Act of 1990 mandates improved accountability systems, requiring states to measure student skills and performance in the areas of competency attainment, job or work skill attainment, retention or completion, or placement.

In *Alternate Approaches to Outcomes Assessment for Postsecondary Vocational Education*, editor Debra D. Bragg remarks that

> given the scope and intensity of the educational reform movement, it is not surprising that institutions are being encouraged to look at a broader set of outcomes than had been used traditionally and to reexamine the means by which these outcomes were being measured. As new educational goals emerge to address reform directives and as new approaches to vocational education are employed, alternative approaches to outcomes assessment are essential.

Alternative Approaches focuses on innovations in postsecondary vocational education outcomes assessment as identified during a two-year study at the NCRVE site at the University of Illinois. Bragg and her co-contributors intend their considerations primarily for local postsecondary education leaders—community college presidents, institutional researchers, and vocational education administrators—"who have the responsibility for conceptualizing and administering outcomes assessment, especially in vocational

education." According to Bragg, "For this audience, [the] goal is to bring a new level of understanding about outcomes assessment and to encourage the exploration of various approaches to measuring outcomes." Local, state, and federal policymakers; government agency staff; program evaluators; researchers; teacher educators; and others involved in advocating, developing, or disseminating innovative methods of outcomes assessment for postsecondary vocational education would also find *Alternative Approaches* useful.

The authors whose essays constitute the seven chapters of *Alternative Approaches* write from the premise that there are three types of outcomes to consider when assessing postsecondary vocational education—institutional outcomes, program outcomes, and student outcomes. The chapters of *Alternative Assessment* address these three outcomes. As the abstracts that follow imply, each chapter focuses on an approach to outcomes assessment, suggests implementation issues and strategies, and discusses applications in one or more postsecondary settings.

Ideas reported in *Alternative Approaches*, contends Bragg,

> represent what we believe are some of the newest and most promising ideas in how to conceptualize and conduct outcomes assessment in two-year postsecondary educational institutions. . . . Our primary purpose . . . was to describe various outcomes assessment approaches, to challenge you to explore them further, and to encourage you to consider how they can be applied to your institutions.

A conclusion that summarizes the highlights of the chapters and offers some suggestions for implementing outcomes assessment in postsecondary vocational education follows the main chapters of *Alternative Assessment*.

Chapter 1
"Perspectives on Assessment Policy & Practice"
Debra D. Bragg and C. Michael Harmon

To provide a basis for exploring alternative approaches in outcomes assessment, Chapter One discusses external forces on accountability, particularly those stemming from recent policy recommendations and legislative mandates. Then, internal forces, which largely reflect shifts in institutional missions and student populations, are presented. With this background, research findings regarding outcomes assessment practices at selected two-year postsecondary institutions are presented. The chapter concludes with a discussion of challenges and recommendations for implementing outcomes assessment in postsecondary settings.

Chapter 2
"Total Quality Management"
Debra D. Bragg

Chapter Two advances the argument that the "M" in TQM (total quality management) could just as easily stand for "measurement" as "management." This chapter discusses the philosophical and theoretical bases for TQM and describes how this comprehensive approach can be implemented to enhance institutional effectiveness and ensure beneficial institutional outcomes for students. Observations are made about how TQM is being implemented at Fox Valley Technical College in Wisconsin.

Chapter 3
"Assessing Student Success"
C. Michael Harmon

Chapter Three focuses on an institutional approach known as the student success model that parallels, at least philosophically, many of the tenets of TQM. While some readers may associate this model with a counseling and educational planning model, we believe that it can provide the basis for outcomes assessment as well. This chapter explores the way Santa Fe Community College (SFCC) in New Mexico has applied the student success model to develop and maintain institutional effectiveness and outcomes assessment.

Chapter 4
"Value-Added Assessment"
C. Michael Harmon

In Chapter Four, the concept of value added is applied to outcomes assessment and discussed in relation to institution, program, and student outcomes assessment. The value-added assessment approaches used by Delaware Technical Community College, Northeast Missouri State University, and Alverno College are discussed. Issues surrounding the relationship between value-added and outcomes assessment are presented. In addition, the controversy about using pretest and posttest designs for measuring value added are explored and an argument for using performance assessment is made. . . .

Chapter 5
"Concept Mapping"
Thomas E. Grayson

Chapter Five describes a recent innovation that offers promise for getting program-level outcomes assessment efforts started, no matter whether they are based on a TQM, student success, value-added, or other approach. Referred to as concept mapping, this innovation is a bottom-up approach for producing a picture of how educational programs work and how they produce outcomes. This chapter illustrates how concept mapping was used to identify outcomes for vocational education at Black Hawk College in Illinois.

Chapter 6
"Outcomes Assessment in Vocational Education"
N. L. McCaslin

In Chapter Six, a schema for assessing educational, economic, and psycho-social outcomes for vocational education programs is presented. This chapter suggests that these outcomes must be considered in light of the educational needs and processes that influence vocational education. To conclude the chapter, a five-step process for conducting outcomes assessment is presented.

Chapter 7
"Performance Assessment"
Linda Mabry

Chapter Seven addresses the contemporary topic of performance of student knowledge and skills. This chapter defines common terms such as "performance assessment," "alternative assessment," and "authentic assessment." The chapter describes assessment techniques such as profiles and records of achievement, portfolios, and performance tasks. The chapter also discusses how these assessment techniques are being implemented in several secondary and postsecondary organizations and describes issues surrounding their use in these settings.

Alternative Approaches to Outcomes Assessment for Postsecondary Vocational Education (MDS-239CA) was edited by Debra D. Bragg from the NCRVE site at the University of Illinois at Urbana-Champaign. (For ordering information, see page 12.)

"LET ME GET THIS STRAIGHT"
What Perkins Accountability Mandates Really Mean

Pandora's Box: Accountability and Performance Standards in Vocational Education by Paul T. Hill, James Harvey, and Amy Praskac presents the results of a study on accountability in vocational education. RAND, a nonprofit research institution established to "further and promote scientific, educational, and charitable purposes . . . for the public welfare," and an active participant in the NCRVE consortium, conducted the study on behalf of NCRVE.

The *Pandora's Box* study "focused on the 'to whom' side of accountability, trying to determine who needed evidence about the performance of vocational education and how they would use that evidence." The study had two goals: (1) "to understand the intentions of the people who formulated and enacted the requirements for vocational education performance standards and accountability" contained in Perkins legislation and (2) "to understand how those requirements would affect state and local accountability processes in vocational education." What began, however, as

> an examination of the potential uses for vocational education performance information by [federal] and state officials, local educators, employers, parents, and students . . . turned quickly . . . to an examination of two prior [issues:]

1. the ways in which states and localities deal with changes in state administration—as required by the 1990 Perkins Amendments—and the extent to which they can advance accountability through performance standards

2. the questions "raised repeatedly" during interviews for the *Pandora's Box* study about whether the Perkins Amendments "imply the need to develop statewide aggregate measures of program performance and, ultimately, national aggregate measures of performance as the foundation of educational accountability"

NCRVE considers *Pandora's Box* a companion to other NCRVE projects and publications that have examined the "for what" of vocational education accountability. These "companions" include *Performance Measures and Standards for Vocational Education* as well as *Local Accountability in Vocational Education: A Theoretical Model and Its Limitations in Practice* and *Beyond Vocational Education Standards and Measures: Strengthening Local Accountability Systems for Program Improvement*, the latter two of which are reviewed together in this issue of *Change Agent* (for that review, see pages 9-12; for ordering information about all three publications, see page 12). As its major conclusion, *Pandora's Box* found that

> the main focus of accountability in vocational education is local, and that the Perkins [legislation] requirements for new performance measures and standards are meant to strengthen local accountability, not to weaken it or to create new channels of reporting to the [federal] government.

Information about the needs of broader regional, statewide, or national labor markets can help educators and students understand opportunities that might not be evident locally

Purpose of Perkins Accountability Requirements

Hill, Harvey, and Praskac explored the purpose of Perkins accountability mandates using interviews with Congressional staff members and lobbyists. The interviews made it clear that no one intended to construct a stream of information to Washington, DC, that would let Congress or anyone else manage vocational education from afar. The drafters of the act also did not intend to obtain a master database from which they could derive an assessment of vocational education nationwide or in any particular locality or state.

It became clear, however, that Congressional members and senior committee staff had concerns about the quality of local programs and about whether they were being implemented with sufficient concern for the needs of local students and employers. Interviewees based their concerns on business leaders' complaints about the quality of high school graduates (including graduates of vocational programs), and on interviewees' own fears that some local managers of vocational education had become "bureaucratic, deadened by routine, and more concerned with protecting staff jobs than with meeting local labor market needs."

Through the Perkins requirements, legislative supporters of vocational education intended to reassure critics that Congress considered the quality of local programs important and "lax or self-indulgent" program administration intolerable. At the same time, however, members of Congress did not want to establish themselves as "the remote, ultimate judges of local processes." Instead, they wanted to create a framework that would guarantee attention to quality issues at the local and state levels.

Effects of Perkins on Local and State Accountability

Results of case studies in seven states, including both urban and rural localities, showed that local accountability processes vary in quality. Some localities ensured the quality and relevance of vocational education programs through processes such as the following:

Perkins requirements for new performance measures and standards are meant to strengthen local accountability, not to weaken it

- Employer advisory committees
- Tracking of employer needs through student placement
- Attracting students via job placement success
- Employer certification of the need for new courses

> Eliminating or upgrading courses with low enrollment or poor placement records

However, many local accountability processes have serious weaknesses, including a "routine-following"

Accountability in vocational education focuses mainly on the local level

mindset and lax tracking of student placement among vocational education providers.

Also, real conflicts of interest exist among local constituencies. In very small communities with only a few employers, healthy accountability processes often work in everyone's interest. In larger communities, however, only a fraction of employers can be consulted directly. As a result, important employer interests remain poorly represented.

Conflicts of interest among students and employers also arise. Established employers sometimes want students prepared for traditional low- and moderate-skilled jobs, preparation that might prevent students from obtaining jobs with employers who require nontraditional or advanced skills, possibly in other localities.

"These conflicts of interest," contend the authors of *Pandora's Box*,

> justify oversight by state and federal governments. The state needs to protect its broader economic future against the narrow localism and short-time horizon that can dominate local accountability processes. The state and federal governments need to help disadvantaged groups that lack the leverage to protect themselves at the local level.

State and federal governments can also help to expand the horizons of local actors in several ways. Information about future economic trends can help employers to anticipate their own needs. Information about the needs of broader regional, statewide, or national labor markets also can help educators and students understand opportunities that might not be evident locally. Both lists of competencies required by employers and testing systems that assess performance in light of those needs can create demands of program improvement.

Competency-based systems can both raise standards and provide concrete guides for program improvement. Program developers derive such systems from lists of competencies created by knowledgeable employers. When used as the basis for curriculum development, student testing, and certification, these lists guide vocational education policy and build employers' competence. They also provide external standards for evaluating program quality and student access.

Based on their case studies, however, Hill, Harvey, and Praskac concluded that "hard outcomes data should supplement, not supplant, processes of consultation and monitoring and the use of managerial judgment."

In the last chapter of the monograph, Hill, Harvey, and Praskac present the conclusions of and draw implications from their research. The topics of conclusions and implications concern national data systems, political accountability and program improvement, aggregating information, state and federal assistance, the relation of outcomes data and local processes, and monitored versus "automated" accountability.

All in all, *Pandora's Box* should go quite a way in alleviating the fears of many educators in regards to the

Congress's concern about the quality of local programs was based on business leaders' complaints about the quality of high-school graduates

Perkins requirements while contributing to important discussions about accountability in vocational education.

Pandora's Box: Accountability and Performance Standards in Vocational Education (MDS-288CA) was prepared by Paul T. Hill, James Harvey, and Amy Praskac from the NCRVE site at RAND. (For ordering information, see page 12.)

ACCOUNTABILITY
Local Perspectives

How can we best foster accountability in vocational education? What is the nature of existing accountability relationships? Concern about the productivity of the U.S. workforce and the competitiveness of the U.S. economy heightens the importance of these questions. Recent reports from the U.S. Department of Labor and the National Educational Goals Panel focused public attention on the performance of the vocational training system. Legislators at state and federal levels are formulating policies aimed at improving vocational education through increased accountability. The policies will be better informed if they are based on thorough knowledge of existing accountability systems.

So begins the first of two NCRVE reports on accountability, both by Brian M. Stecher and Lawrence M. Hanser of RAND.

As its title implies, the first report, *Local Accountability in Vocational Education: A Theoretical Model and Its Limitations in Practice*, describes a model for local accountability in vocational education and explores shortcomings of accountability systems in general. The companion report, *Beyond Vocational Education Standards and Measures: Strengthening Local Accountability Systems for Program Improvement*, considers the demands that federal legislation places on localities and states and proposes policy alternatives for responding to those demands that are influenced by local accountability concerns.

Local Accountability in Vocational Education

Intended for local and state administrators, state and federal policymakers, and vocational education policy researchers, the *Local Accountability* study analyzes and describes local systems of accountability in vocational education. "We know very little about accountability in vocational programs . . . ." Stecher and Hanser assert. "There is no clear picture of the functioning of . . . local accountability systems." Believing as they claim, that "policies will be better informed if they are based on thorough knowledge of existing accountability systems," the authors contend that the program descriptions of *Local Accountability* "serve as the basis for further study of vocational programs, for developing criteria for evaluating accountability systems, and for monitoring the impact of policy changes."

Most formal policy initiatives in educational accountability focus on "highly aggregated" accountability at the state or federal level. Legislation and other initiatives can also, however, define accountability systems in local terms. The Carl D. Perkins Vocational and Applied Technology Education Act of 1990 promotes both local and state accountability, placing with states "the final responsibility for establishing measures and standards and for ultimate program supervision after placing initial responsibility at the local level for program evaluation and improvement."

Because of their importance in understanding the impact of this model of accountability, the manner in which vocational programs presently function with respect to

We can identify many practical constraints that reduce the effectiveness of the components in a local accountability system

their multiple constituencies require examination. *Local Accountability* analyzes the extent to which local accountability systems exist in vocational education and describes the nature of the underlying relationships between such programs and their constituents. In exploring local accountability, Stecher and Hanser visited secondary and postsecondary vocational programs in California, Florida, Michigan, Ohio, and Oklahoma. They gathered information about programs and interviewed students, parents, instructors, employers, and administrators. They also interviewed staff at the departments of education for each state. Interviews explored the relationships between the programs and local constituencies.

Four major conclusions emerged from the *Local Accountability* study. First, the study found widespread evidence of functioning accountability systems in vocational programs at the local level. Second, four

elements—goals, measures, information feedback loops, and change mechanisms—and the relationships among them describe these accountability systems. Stecher and Hanser have developed a simple model based on these elements that does a reasonable job of describing accountability relationships across a spectrum of vocational programs. Third, the quality of these elements and the relationships among them account for much of the variation in local accountability systems. Limitations in these components, the authors found,

Policies will be better informed if they are based on thorough knowledge of accountability systems as they currently exist

interfere with the overall effectiveness of the accountability system. Fourth, the authors identify many practical constraints that reduce the effectiveness of the elements in local systems of accountability. Identification of these elements provides a basis for developing both criteria for evaluating local accountability systems and prescriptions for improving them.

Stecher and Hanser found that programs had deficiencies in each of the elements of the model the authors developed and in the interactions among those elements. Specifically, the study found *goals* ineffective when the following occurred:

- interlocking goals at the action (local) level did not support higher-level goals
- the broadness or vagueness of the goals made it impossible to know when or if they had been achieved
- relevant constituencies did not understand and/or support the goals
- the priorities among the goals remained unstated or unclear
- consonance with or did not sufficiently encompass goals
- adequate technical quality
- meaning for constituents

In their chief role, *measures* provide evidence of goal attainment; the most important measures relate directly to established goals. The study found measures ineffective when they lacked the following:

Feedback conveys information about measures to administrators, program staff, and school system constituents as well as among administrators and staff. Potential deficiencies in feedback include the following:

- insufficient communication
- inaccurate communication
- low signal-to-noise ratio—a high rate of communication with very little useful content

Ultimately, accountability systems lead to reform in organizations. Organizational *change mechanisms* can falter as a result of the following:

- regulations that limit options for change
- insufficient resources
- overattention to the needs of one constituency (e.g., employer groups)
- priority to short-term demand rather than long-term trends
- difficulties in balancing competing goals and principles (e.g., equity versus placement)
- lack of formal procedures for change
- ineffective leadership for reform

"Greater experience with this model of local accountability will improve its usefulness as an analytic tool," contend Stecher and Hanser. For example, the model can serve as a basis for monitoring the effects of state and federal initiatives," including the 1990 Perkins Amendments.

The follow-up companion to *Local Accountability, Beyond Vocational Education Standards and Measures*, does in fact work from this model of local accountability in monitoring such effects.

While the report's summary provides a useful outline of *Local Accountability*'s main points, a more thorough,

specific, and valuable discussion constitutes the bulk of the report and warrants a thorough examination.

Beyond Vocational Education Standards and Measures

Beyond Vocational Education Standards and Measures: Strengthening Local Accountability Systems for Program Improvement, also by Stecher and Hanser, examines vocational education accountability at the local level in an effort to provide information that might improve the implementation of Perkins' Amendments provisions.

Results of the study show that local accountability systems exist in many vocational programs. While existing local accountability systems do evince value in improving programs and can, in fact, accommodate the mandates of the Perkins Amendments, such systems are less accommodating of other, often broader Perkins mandates.

Most vocational programs have appropriate local accountability systems

Written for local practitioners involved in adapting the new Perkins accountability requirements, state policymakers charged with implementing them, and federal policymakers involved in 1995 reauthorization of vocational legislation, the authors of *Beyond . . . Standards* suggest ways that local and state programs "can improve the functioning of local accountability systems" and recommend "changes in federal vocational education policy to further the goals of program improvement" that motivated the 1990 Perkins Amendments.

"Unfortunately," Stecher and Hanser observe,

> little is known about the local program context and the likely interplay between local conditions and Perkins [legislation] accountability mandates. The study reported here explores accountability from the local perspective to provide insights into the ways in which local programs define their goals, interact with their constituents, use information, and make program-related decisions. It also attempts to define the role states could play in support of these functions.
>
> [We] developed a model of the local accountability systems currently operating in vocational education programs. The model illustrates how goals, measures, feedback, influence, and reform interact to influence program practice. The model also offers guidance for evaluation and strengthening local accountability systems. Finally, it can be used as a basis for analyzing the interplay between existing global accountability and accountability as envisioned under [the Perkins Amendments].

Stecher and Hanser draw five conclusions based on their analysis of federal policies, local accountability systems, and the interactions between them; the conclusions are addressed in detail in the *Beyond . . . Standards* report:

1. Most vocational programs have functioning local accountability systems consistent with the model envisioned in the Perkins Amendments.

2. Local accountability systems can be effective tools for program improvement if practical obstacles can be overcome.

3. States can do much to evaluate and strengthen local accountability systems.

4. Neither state education agencies (SEAs) nor local education agencies (LEAs) are fully prepared to carry out their responsibilities *vis-á-vis* accountability under the Perkins Amendments.

5. The Perkins Amendments may overemphasize state-adopted outcome-based standards and measures.

Beyond . . . Standards concludes with an impressive set of implications and with recommendations about modifying Perkins and associated legislation.

Local Accountability in Vocational Education: A Theoretical Model and Its Implications (MDS-291CA) and *Beyond Vocational Education Standards and Measures: Strengthening Local Accountability Systems for Program Improvement* (MDS-292CA) were prepared by Brian M. Stecher and Lawrence M. Hanser from the NCRVE site at RAND. (For ordering information, see page 12.)

ORDERING INFORMATION

Alternative Approaches to Outcomes Assessment for Postsecondary Vocational Education
MDS-239CA D. D. Bragg $9.00

Beyond Vocational Education Standards and Measures: Strengthening Local Accountability Systems for Program Improvement
MDS-292CA B. M. Stecher, L. M. Hanser $4.00

Local Accountability in Vocational Education: A Theoretical Model and Its Limitations in Practice
MDS-291CA B. M. Stecher, L. M. Hanser $5.00

Pandora's Box: Accountability and Performance Standards in Vocational Education
MDS-288CA P. T. Hill, J.Harvey, A. Praskac $4.50

Performance Standards for Vocational Education: 1991 Survey Results
MDS-388CA E. G. Hoachlander, M. L. Rahn $6.00

Testing and Assessment in Secondary Education: A Critical Review of Emerging Practices
MDS-237CA C. Hill, E. Larsen $6.50

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School-to-Work

NCRVE Change Agent

Shaping the Future of Vocational Education

Volume 4, Number 3 | National Center for Research in Vocational Education | September 1994

ABOUT NCRVE

NCRVE is established under authorization of the Carl D. Perkins Vocational Education Act to engage in two vocational education-related activities: (1) applied research and development and (2) dissemination and training. Our mission is to address the goals of preparing individuals for substantial and rewarding employment and of acting as a catalyst for a shift to an economy dominated by a skilled and flexible workforce.

NCRVE is a consortium of educational institutions led by the University of California at Berkeley's Graduate School of Education. This consortium also consists of the Teachers College at Columbia University, the University of Illinois, the University of Minnesota, RAND, Virginia Polytechnic Institute and State University, and the University of Wisconsin at Madison.

In addition to its research and development agenda, NCRVE supports five dissemination and training programs: (1) dissemination; (2) professional development; (3) special populations; (4) planning, evaluation, and accountability; and (5) program development, curriculum, and instructional materials. This publication is part of our commitment to those on the front lines of vocational education, striving to create a new vision.

NCRVE Administrative Staff

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INTRODUCING A NEW NCRVE MINICATALOG

Earlier this year, President Clinton signed into law an important piece of education legislation, the *School-to-Work Opportunities Act*. While the National Center for Research in Vocational Education (NCRVE) has continually sponsored projects dealing with school-to-work issues and initiatives, only recently has NCRVE begun to distribute a school-to-work minicatalog.

Like NCRVE's other minicatalogs, the "School-to-Work" catalog highlights an important area of vocational education in which NCRVE has produced a significant amount of conceptual and practical thinking. NCRVE has organized "School-to-Work" around the central themes of the *School-to-Work Opportunities Act*—school-based learning, work-based learning, and connecting activities—as well as the issues of accountability and assessment.

This issue of **Change Agent** reviews six recent NCRVE publications included in the "School-to-Work" catalog. The free "School-to-Work" catalog is available from the NCRVE Materials Distribution Service (see page 12 for details).

AN ANNUAL REPORT ON SCHOOL-TO-WORK PROGRAMS

School-Based Learning

The 1990 Amendments to the Carl D. Perkins Vocational and Applied Technology Act require the National Center for Research in Vocational Education (NCRVE) to prepare an annual report of the research conducted on successful education-to-work transition approaches. *Research on School-to-Work Transition Programs in the United States* by David Stern, Neal Finkelstein, James R. Stone III, John Latting, and Carolyn Dornsife is the 1994 fulfillment of that requirement—it is also an example of the NCRVE publications listed in the "School-Based Learning" section of NCRVE's new "School-to-Work" minicatalog.

Research on School-to-Work opens with a brief overview of "the difficulties encountered by many young people in making the transition from school to work." Such difficulties include or are exacerbated by an increasing scarcity of career jobs, reduced employment in the manufacturing sector, employers' increased demands for cognitive ability on the part of employees, and the growing disparity between the earnings of average high school graduates and those of high school graduates who are more competent in mathematics or who go on to graduate from four-year colleges.

The most immediate implication of this situation, according to *Research on School-to-Work*, is that the success of school-to-work programs cannot be judged simply in terms of students' first full-time jobs; instead, the success of school-to-work programs needs to be gauged in terms of lifetime employment histories—by how these programs prepare students for lifelong learning and how the programs prepare students with the knowledge and skills necessary to change jobs.

Research on School-to-Work adopts a narrower definition of school-to-work than one that would include "any and all efforts that contribute to successful school-to-work transition." A discussion based on such a definition would be unwieldy since the definition "would encompass all kinds of schooling and non-school education that help in any way to prepare for working life." Therefore, *Research on School-to-Work* focuses on the second of two main categories of school-to-work programs—the first of which, school-*and*-work programs, simply "allow students to work and attend school during the same time period."

Research on School-to-Work instead equates school-to-work with the second category, school-*for*-work programs —"education and training programs in which preparation for work is explicitly a major purpose." More narrowly, the report focuses on work preparation programs that serve high school students, nonbaccalaureate postsecondary students, or out-of-school youth. Specifically, it focuses on cooperative

education, youth apprenticeship, other work experience, school-based enterprise, Tech Prep, career academies, and school-to-apprenticeship.

A key element of most school-to-work programs is the combination of school and work in some form during the same period of time. The following three programmatic features are especially important in determining the nature of the programs and the kinds of students who participate:

1. integration of school-based and work-based learning

2. combined vocational and academic curriculum

3. linking of secondary and postsecondary education

Each of these features is discussed in detail in the first section of the report.

Discussion of the various program types addressed by *Research on School-to-Work* is structured within the framework of four "programs" sections: The first, "School-and-Work Programs in Secondary Schools," covers cooperative education, youth apprenticeship, school-based enterprise, and non-school-supervised work experience. In addition, the section discusses issues relating to career counseling, job placement, and mentoring programs as well as the results of an NCRVE longitudinal survey that studied the effects of students working while in high school.

The second of the four sections, "School-and-Work Programs in Two Year Colleges," covers cooperative education programs and apprenticeship programs as well as career counseling and job placement in two-year colleges, all of which, the report posits,

> are taking increasingly diverse roles in the delivery of job-related instruction. While it has always been the case that community, junior, and technical colleges offered some vocational curricula, the range of direct linkages with outside organizations [including employment providers] has become remarkably wide.

The third section, "Relevance of Vocational Education to Subsequent Employment" explains how

> cooperative education, apprenticeship, or other school-and-work programs engage students in school and work during the same period of time. The relationship between school and work is concurrent. In addition, high schools and two-year colleges, particularly their vocational education programs, include preparation for work as a major part of their mission. They are school-for-work programs. If they succeed, there should be a sequential connection between school and work. Evidence about this sequential link is reviewed in this section.

In the fourth section, "Programs for Out-of-School Youth," *Research on School-to-Work* briefly explores the numerous programs that "have attempted to improve the job prospects of young people who are not in school and are looking for work." Based on a study of relevant literature, the report concludes that while some programs have a record of improving earnings, "the resources and structures of these programs are largely unable to overcome problems related to family structure, neighborhood structure, education, and health."

For each of the program types discussed—cooperative education, youth apprenticeship, other work experience, school-based enterprise, Tech Prep, career academies, and school-to-apprenticeship—*Research on School-to-Work* provides

The success of school-to-work programs cannot be judged simply in terms of students' first full-time jobs; instead, success of such programs needs to be gauged in terms of lifetime employment histories

a definition and history; summarizes important related research findings; assesses the value of the program type as an educational initiative; highlights what the report calls "elements of good practice," describes examples of program implementation in the United States, and/or discusses emerging issues.

Choosing a School-to-Work System

The conclusion of *Research on School-to-Work* poses an important question about what local and state decisionmakers can learn from the research that may inform the strategic decisions they face in designing new school-to-work systems. To this, the authors of the report answer,

> Probably the most fundamental decision is whether the new system will be designed only for the "non-college-bound" or whether it will be more inclusive. This choice has a direct bearing on what kind of school-based instruction and what kind of work-based learning should be offered.

These issues are the foundation of the major findings of *Research on School-to-Work Transition Programs in the United States*. Among the issues to be considered in the strategic choices that decionsmakers will have to make are the following:

- the role of vocational education in general in the United States
- the nature of the students whom school-to-work programs are to prepare and those students' relationship to students whom school-to-work programs will not serve
- the image of a new, supposedly comprehensive school-to-work system in the eyes of students, educators, and the public in general
- ease of access to and flexibility in transitioning from a school-to-work system
- the nature of the school-to-work curriculum, including where and how it will be delivered
- the relative emphasis on learning to do work versus learning to think

While it has always been the case that community, junior, and technical colleges offered some vocational curricula, the range of linkages with outside organizations has become remarkably wide

Ultimately, the report concludes,

> the questions are complex, and there are few definitive answers. Even when programs have been found to be effective, it is usually not possible to say exactly why they are effective because the programs themselves are multifaceted [and] each program model . . . has been implemented differently in different places. . . . If new school-to-work programs can improve students' performance, public authorities need not worry about whether certain program components are included.
>
> Finally, it is useful to recall that school-to-work transition seldom means an abrupt transition from full-time schooling to full-time employment. The initial transition from school to work usually occurs over a period of several years, during which work is combined with school. A successful school-to-work transition system will use this initial transition period to help young people find and keep the kind of full-time job they want, with a minimum of wasted time. But it will also do more than that. A successful system will enable young people to master the process of learning while they work. In a fast-changing economy, this is fundamental.

Research on School-to-Work Transition Programs in the United States (MDS-771CA) was prepared by David Stern, Neal Finkelstein, James R. Stone III, John Latting, and Carolyn Dornsife from the NCRVE site at the University of California at Berkeley. (For ordering information, see page 12.)

DIVE RIGHT IN!
Work-Based Learning

> Vocational education and training must prepare workers to function effectively in . . . new environments; reciprocally, . . . new work environments must draw on, reinforce, and encourage the further development of the skills, knowledge, and behaviors addressed by education and training programs.

This is one contention of a recent NCRVE publication that explores another area of school-to-work transition —work-based learning. *Learning the Ropes: The Social Construction of Work-Based Learning* by Sylvia Hart-Landsberg, Jane Braunger, Stephen Reder, and Mary M. Cross argues the importance of work-based learning, raises some key issues in this area, and offers a framework for assessment, finally putting that framework to the test with medical unit secretaries in a large private hospital—an occupational group and work setting "characterized by considerable learning the ropes."

The significance of and need for work-based learning, *Learning the Ropes* contends, can be understood in both practical and theoretical terms. Practically speaking, much of the short-term future workforce is already on the job; demographic projections about the future workforce indicate a substantial need for worker training and education in the short-term future; and according to projections, increasing percentages of entering workers will lack the basic knowledge and skills that high-wage jobs require. "Ultimately, if workers and companies are to remain competitive, . . . significant investments in work-based education and training will likely be required." On the theoretical side, successful efforts to coordinate educational and workplace restructuring will likely require innovative and far-ranging but specific theories about the relationships between education, training, and work and about the processes that occur with each.

Learning the Ropes is as interesting for its activity theory framework as it is for its conclusions

With the importance of work-based learning established, *Learning the Ropes* briefly outlines four key issues in the area of work-based learning:

1. distinguishing learning from doing in workplace settings
2. specifying developmental relationships between effective and cognitive components of work-based learning
3. identifying the social organization of expertise in workplaces
4. understanding the relationship between individual learning and organizational development

In the ethnographic research done for the *Learning the Ropes*, each of these issues is addressed in detail.

The framework employed by the *Learning the Ropes* researchers is based in "activity theory," which takes human activity as the "basic unit of analysis" in efforts to understand behavior and the mind. In activity theory approaches, an activity system—which is constituted by a subject (or practitioner), an object (motive), mediating artifacts (tool, signs, and symbols), rules, a community, and a division of labor—is analyzed on both individual and community levels. *Learning the Ropes* is as interesting for this framework as it is for its conclusions.

The oft-used informal term "learning the ropes" suggests one of many important types of workplace learning processes. Learning the ropes is unique as a workplace learning process in that it is accomplished in a largely "unsupported" manner, "without benefit of either the master-learner format of apprenticeship learning or the guided practice characteristic of on the job training." Individuals learn the ropes by "figuring out how things work in an organization, learning to whom one goes for help in dealing with various kinds of problems . . ., learning how to collaborate [in an] 'organizational culture,'" and so forth. This, then, is the paradigm by which the work-based learning of a group of novice and experienced medical unit secretaries was

studied—through observation, interviews, and document collection.

The conclusions of *Learning the Ropes* fall into three categories: (1) the connections between learning and doing, (2) the role of the activity system in the learning process, and (3) the impact on the learner and the activity system of unsupported learning experiences. These findings indicate that learning the ropes, "much more than an accretion of skills or procedural knowledge, is a matter of coming to understand the work and its context as a . . . developing system."

1. Learning and doing
    - Learning the job is a major part of the job
    - Learning and doing are concurrent; an antecedent/consequent model of training and work is not applicable to the hospital units studied
    - Learning the ropes entails developing four capabilities that underlie the required skills for unit secretaries (organizing the workload, relating to people, learning the organization of the unit and hospital, and developing a concept of self in relation to work and the organization)
2. Reflection-in-action in the activity system
    - A large part of learning the ropes is learning the activity system
    - Learning in the activity system occurs through a process of reflection-in-action that is largely self-initiated

The nature and structure of the knowledge that accrues with experience requires clarification

    - A unit secretary who is learning the ropes participates in the ongoing interpretation and negotiation of the activity system
    - Learning about each component of the activity system is a driving force in the activity system
3. Supported and unsupported learning in the activity system
    - Learners see themselves as constantly engaged in learning, but as seldom being taught; however, in this community, each individual is a teacher and each is a learner
    - Unsupported learning is the norm here, even though there is much assisted performance

Keeping in mind the conclusion of *Learning the Ropes*—that learning the ropes is a process of coming to understand the "big picture" of a workplace system rather than simply "the accretion of skills or procedural knowledge"—school-to-workplace training can extend the learning that already takes place by

- recognizing the essential role of assisted learning
- creating conditions to foster assisted learning
- designing and implementing innovations that structure learning in the workplace
- designing and implementing innovations that structure occupational learning in schools

Like the conclusions that lead to them, these implications are discussed in detail in the report.

The authors of *Learning the Ropes* situate their work as the first of what will necessarily be many investigations of learning the ropes as a type of work-based learning. Studying "both the nature and the content of 'the ropes' that experienced workers have learned as well as a means through which new workers learn those 'ropes' over time" is required. The nature and structure of the knowledge that accrues with experience will require clarification. Ultimately, the manner in which new workers acquire "ropes" knowledge and the manner in which literacy, communication, and job-related skills impact that acquisition over time will require longitudinal study.

Learning the Ropes: The Social Construction of Work-Based Learning (MDS-413CA) was prepared by Sylvia Hart-Landsberg, Jane Braunger, and Stephen Reder of the Northwest Regional Education Laboratory and Mary M. Cross from the NCRVE site at the University of California at Berkeley. (For ordering information, see page 12.)

SPECIAL POPULATIONS AND MORE
Connecting Activities

There are a number of issues and concerns not directly or exclusively related to school-to-work initiatives that are nonetheless important to the success of school-to-work programs. Decisionmakers and practitioners will find NCRVE publications concerning such issues useful and even necessary as they work to develop a successful national school-to-work system and implement it at the local and state level. Three of these publications—*Gender Equity: A Resource List of Organizations and Information Centers* and the two volumes of *Exemplary Programs Serving Special Populations*—address two such issues.

Gender Equity, compiled by the NCRVE Office of Special Populations (OSP) at the University of Illinois, is one in a series of ongoing efforts of this office designed to contribute to four of the OSP's objectives:

1. To increase awareness and understanding of critical issues in vocational special needs education
2. To increase the use of available resources
3. To initiate support networks of professionals
4. To promote exemplary program activity and the adoption of model practices

In their introduction, *Gender Equity*'s compilers outline the significance of gender issues in vocational education:

> Gender equity remains a challenge to educators, employers, administrators, and service providers as they respond to the growing diversity in today's workforce, changes in society, and economic demands. It means the existence of conditions that give girls and boys, women and men the same opportunities and choices to advance themselves in education, training and careers . . . based on their abilities and talents and not on gender role stereotypes and expectations. . . .
>
> By the turn of the century, women are expected to account for nearly half of the labor force. The government is moving to meet the growing needs of this population by enacting the Carl D. Perkins Vocational and Applied Technology Education Act of 1990 and introducing the Gender Education Equity Act (H.R. 1793) of 1993 in Congress. The 1990 Perkins Act contains provisions designed to increase the education and career opportunities of girls and women in vocational education. H.R. 1793 addresses the issues of gender bias and inequity within the educational system that negatively affects girls and women. It contains nine bills, including the Women's Education Equity Act (WEEA). In addition to such positive legislative initiatives, a number of organizations, institutions, educational information/research centers, and special interest groups have been strong advocates for the rights of girls and women.

While intended to be selective rather than comprehensive, the guide itself contains descriptions and contact information for over 160 organizations, educational information centers, and human resources focusing on gender equity.

— — —

Each of the two volumes of *Exemplary Programs Serving Special Populations* (Volume 1 by Zipura T. Burac and Volume 2 by Zipura T. Burac and Robert Yanello, both from OSP at the University of Illinois) highlights five exceptional programs serving individuals from special populations selected by OSP in 1990 and 1991. OSP searches for and provides information about exemplary programs as part of its mission of improving vocational programs.

Designed for administrators, state personnel, program coordinators, practitioners, and researchers, the two volumes were developed to

- disseminate information about exemplary programs
- provide models that can be adapted by those interested in developing programs
- provide specific examples of innovative practices and strategies that other programs can emulate

In addition to the information about the programs themselves, *Exemplary Programs* also provides

background on the search for the programs, including a discussion of the framework by which the programs were identified.

Gender Equity and the *Exemplary Programs* volumes are just three examples of the many NCRVE publications that are contributing and will continue to contribute to the development of school-to-work programs in the United States. Below is a categorized list of all publications listed in the "Special Populations" division of the "Connecting Activities" section of NCRVE's "School-to-Work" minicatalog. They are all available from the NCRVE Materials Distribution Service (for contact information, see page 12).

Special Populations—General

Increasing Vocational Options for Students with Learning Handicaps: A Practical Guide
Resources To Facilitate the Transition of Learners with Special Needs from School-to-Work or Postsecondary Education
Selected Resources To Facilitate the Transition of Learners with Special Needs from School-to-Work or Postsecondary Education, Vol. 2

Special Populations—Corrections

Bright Hopes, Dim Realities: Vocational Innovation in American Correctional Education

Special Populations—Rural/Urban

Selected Vocational Preparation Resources for Serving Rural Youth and Adults with Special Needs
Selected Vocational Preparation Resources for Serving Urban Youth and Adults with Special Needs

Special Populations—Exemplary Practice

Effective Vocational Education for Students with Special Needs: A Framework

Special Populations—LEP

Collaboration for Instruction of LEP Students in Vocational Education
Preparing Adult Immigrants for Work: The Educational Response in Two Communities

Special Populations—Teen Parents

Access to and Use of Vocational Education in Teen Parent Programs

Gender Equity: A Resource List of Organizations and Information Centers (MDS-744CA) was compiled by the Office of Special Populations at the NCRVE site at the University of Illinois. *Exemplary Programs Serving Special Populations, Volume 1* (MDS-303CA) was prepared by Zipura T. Burac and *Exemplary Programs Serving Special Populations, Volume 2* (MDS-424CA) was prepared by Zipura T. Burac and Robert Yanello, both from the Technical Assistance for Special Populations Program (TASPP) at the NCRVE site at the University of Illinois. (For ordering information, see page 12.)

REVISING EDUCATIONAL ASSESSMENT
Accountability & Assessment

Like *any* successful educational initiative or set of initiatives, the school-to-work initiative will require effective (and perhaps unique) methods of assessment and systems of accountability. Like the many connecting activities alluded to above, issues of accountability and assessment are not unique to school-to-work initiatives, but such issues must necessarily be discussed within the context of school-to-work.

Two items about accountability and assessment available from NCRVE are reviewed here—the first is a monograph, the second a videotape.

In *Assessment in Education: A Search for Clarity in the Growing Debate*, author John Latting attempts to clarify recent developments in educational assessment. As anyone involved with or following educational reform knows, summarizing the developments in *any* area of education over the course of the last decade is no simple task—no less so in an area as controversial as educational assessment. For educators and decisionmakers, *Assessment in Education* serves as a concise and valuable guide to the more significant developments in assessment over the last decade. Whether they be reforms inspired by the need to

develop new forms of vocational education in response to changing economic and demographic conditions, reforms mandated by legislation such as the 1990 Amendments to the Carl D. Perkins Vocational Education Act, or reforms driven by the persistent criticisms of American education in general, developments in educational assessment during the last ten or so years have fortunately been numerous and diverse—so numerous and diverse, in fact, as to be overwhelming to those making decisions about assessment for their classrooms or their schools.

Assessment in Education is not so much about the specific assessment reform initiatives that have developed over the last decade as it is about the

Interest is growing in alternatives to pencil-and-paper tests that assess not just what students know, but how they can apply that knowledge.

foundations upon which the philosophies of assessment are formed. Throughout his monograph, Latting refers to and speaks in terms of three "camps" of educational assessment: The first, the *psychometric tradition*, "treat[s] the measurement of both aptitude and achievement as an exact science" and "assign[s] quantities to a whole range of mental properties." The second and third, *performance assessment* and *alternative assessment*, are both reactions against the psychometric tradition, the forms of which (most notably, multiple choice tests) are criticized for, among other things, their cultural bias, their inability to test for what interests educators, and their "deleterious" effects on instruction and learning. The second camp, *performance assessment*, emphasizes "the supposed failure of tests to measure accurately the kind of knowledge that is of most use to society"; the third, *alternative assessment*, emphasizes the instructional and learning effects of testing.

After defining these camps and before discussing the various forms of assessment envisioned by each, *Assessment in Education* presents the characteristics of assessment in general. Latting begins with the uses of educational assessment: classroom instructional guidance; system monitoring; and selection, placement, and certification of students—clarifying and giving examples of each. Next, the author defines and describes what he calls the *organizational*, *physical*, and *technical* features of educational assessment. Any assessment, Latting contends, is a construction of several formal features or variables that define the nature of that particular assessment. Finally in discussing the characteristics of assessment, *Assessment in Education* broaches the notions of *reliability*—the consistency of test scores—and *validity*—the extent to which inferences based on a test score are appropriate.

The bulk of *Assessment in Education* is devoted to detailed discussions and evaluations of the three distinct, though not mutually exclusive assessment camps. Most of the discussion and evaluation takes the form of summaries of the literature concerning assessment. Each of the camps is taken up in order, with the discussions of performance assessment and alternative assessment following the discussion of the psychometric tradition and presented as much in reaction to the tradition as camps in their own right. In an effort at objectivity, however, Latting includes a section entitled "A Response from the Psychometric Tradition" to round out the discussions in the section.

The value of *Assessment in Education* as a guide to those interested in understanding assessment is qualified by one inherent though expressed limitation. That limitation, however, points back to the value of the guide, according to W. Norton Grubb, NCRVE Site Director at the University of California at Berkeley and author of *Assessment in Education*'s preface:

> Unfortunately--as is often the case in periods of reform—there are not yet clear results. The new assessments described in this monograph are for the most part still far from completion. None of them is going to be able to serve all the purposes that tests now serve. This makes it all the more important, however, for educators to understand the nature of current developments so that they can distinguish those approaches to assessment that are likely to be useful for their specific purposes from others that are unlikely to be of much help.

Assessment in Education should be of help to educators in this respect.

The hour-long videotape *Assessment 2000: An Exhibition* is the product of a 1993 interactive video teleconference about three forms of student assessment used as alternatives to traditional pencil-and-paper testing: the student project, the performance event, and portfolios. Teleconference host and NCRVE researcher E. Gareth Hoachlander discusses these assessment alternatives with a guest panel that includes a student and representatives of education; business; and staff of Far West Laboratory, co-producers of the videotapes.

Innovators are constantly under pressure to justify the success of their reforms, to show improved outcomes, and to prove to legislators that their funds are well spent

The guests were assembled for the teleconference to describe the three assessment techniques and to share their experiences in using the techniques. In addition, throughout the course of the program, Hoachlander and his guests field questions from teleconference participants calling in from various remote sites.

Production of the teleconference, according to Hoachlander, was inspired by growing interest in alternatives to pencil-and-paper tests that assess not just what students know, but how they can apply that knowledge.

The student project technique is covered first. While the requirements for such projects vary, they generally include the following components:

- a research paper
- a tangible product
- an oral exhibition

Student projects also have four key features:

- They are appropriate for all students
- They involve writing, doing, and speaking
- They require extended commitment on the part of students
- They foster student-teacher interaction

In addition to several other issues, the ways in which student projects improve assessment and caveats of the technique are highlighted.

The performance event requires students to apply their knowledge and skills in work-related situations, either real or simulated. In performance events, students are required to

- diagnose problems
- identify alternative solutions
- take appropriate actions
- successfully complete tasks

Discussion during the teleconference focuses on the nature and advantages of the performance event technique and on important considerations of performance event planning.

The last of the three techniques covered, the portfolio, is the most commonly implemented of the three and therefore is very likely familiar to those viewing the teleconference. Because the use of portfolios as assessment tools is fairly common, the components and features of implementation vary widely. As with the other two methods, however, the advantages and other important considerations of the method are discussed.

Assessment 2000 serves as a good introduction to the three assessment techniques. In addition to providing basic information about the nature of each technique and the important considerations that go into implementing them, the teleconference attempts to frame the techniques within the scope of more traditional testing methods.

Assessment in Education: A Search for Clarity in the Growing Debate (MDS-254CA) was prepared by John Latting from the NCRVE site at the University of California at Berkeley and *Assessment 2000: An Exhibition* (MDS-766CA) was produced by NCRVE and Far West Laboratory. (For ordering information, see page 12.)

Coming in December's Change Agent . . .

Leadership & Professional Development

- Breakers: An Organizational Simulation for Vocational Education Professionals
- Case Studies in Vocational Education Administration: Leadership in Action
- Vocational Education Leadership Development Resources: Selection and Application
- Preparing Leaders for the Future: A Development Program for Underrepresented Groups in Vocational Education
- *Leadership Effectiveness Index* Manual
- *Leadership Attributes Inventory* Manual

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Leadership & Professional Development

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Assessment 2000: An Exhibition
MDS-766CA NCRVE $15.00
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Leadership & Professional Development

NCRVE Change Agent

SHAPING THE FUTURE OF VOCATIONAL EDUCATION

ume 4, Number 4 National Center for Research in Vocational Education December 1994

ABOUT NCRVE

The National Center for Research in Vocational Education (NCRVE) is established under authorization of the Carl D. Perkins Vocational Education Act to engage in two vocational education-related activities: (1) applied research and development and (2) dissemination and training. Our mission is to address the goals of preparing individuals for substantial and rewarding employment and of acting as a catalyst for a shift to an economy dominated by a skilled and flexible workforce.

NCRVE is a consortium of educational institutions led by the University of California at Berkeley's Graduate School of Education. This consortium also consists of the Teachers College at Columbia University, the University of Illinois, the University of Minnesota, RAND, Virginia Polytechnic Institute and State University, and the University of Wisconsin at Madison.

In addition to its research and development agenda, NCRVE supports five dissemination and training programs: (1) dissemination; (2) professional development; (3) special populations; (4) planning, evaluation, and accountability; and (5) program development, curriculum, and instructional materials. This publication is part of our commitment to those on the front lines of vocational education, striving to create a new vision.

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THE RIGHT INSTRUMENT
Measuring Leadership Development

Two recently revised instruments, developed at the NCRVE site at the University of Minnesota, provide users with tools for assessing the leadership performance of individuals in vocational education. As their titles indicate, the guides for the two instruments—Leader Effectiveness Index *Manual* and Leader Attributes Inventory *Manual*, both by Jerome Moss, Jr., Judith J. Lambrecht, and Qetler Jensrud from the University of Minnesota site and Curtis R. Finch from the Virginia Polytechnic Institute and State University site—outline the development and use of the instruments.

"Education is a latecomer to the study of leadership and almost no research has been done in vocational education," according to the Leader Attributes Inventory (LAI) *Manual*. As yet, "there is no consensus on a specific definition of leadership, an explanatory model of leadership behaviors, or the most useful means for measuring the effectiveness of leaders. There is, however, substantial agreement that leadership behavior can be measured and shown to be related to effective performance and that educational interventions can effect the behavior of leaders." Both the *LAI* and the *Leader Effectiveness Index* (*LEI*) are efforts in the direction of that agreement.

NCRVE's role in leadership development is not simply mandated by legislation (Perkins legislation, specifically). Because NCRVE exists as a national leader in vocational education, its role is the natural outgrowth of a nationwide demand for effective leadership development. The need for strong leaders (and consequently, for effective leadership development) is also an inherent result of unstable situations like that in which vocational education finds itself—unstable because of the changes that are rapidly and significantly impacting education and the social and economic environment in which it exists. NCRVE's goal in the area of leadership development is to foster the number and quality of leaders prepared to meet present and future challenges of vocational education.

The *LAI* yields a diagnostic assessment by multiple observers (including the individual being assessed) of 37 attributes—characteristics, knowledge, skills, and values—that predispose individuals to desirable leadership performance in vocational education. The manual for the inventory gives the rationale for the *LAI*, describes the developmental and psychometric characteristics assessed by the inventory, and explains the inventory's use. The manual is designed especially for potential users of the inventory but would also be of interest to those who study leadership and leadership measurement.

Comprehensive assessment of an individual with the *LAI* involves a self- and observer ratings. For both types of ratings, 37 items assess the 37 attributes with a 6-point response scale that describes the extent to which the person being rated possesses each attribute. Among the attributes are insightfulness, adaptability, accountability, dependability, communication, ability to delegate, and ability to manage information. The individualized feedback report produced from the inventory contains three charts, which (1) compare a ratee's self-ratings with the average rating of his or her observers, (2) compare the average rating of his or her observers for each attribute with those of an appropriate norm group, and (3) predict the level of leadership performance expected of the participant in his or her norm group.

The LAI assesses attributes that predispose individuals to desirable leadership performance in vocational education

Because the ideas of norms and standards are so important, "second in importance only to the identification of relevant attributes and their consistent measurement," the authors of the LAI *Manual* go to lengths to describe the extensive process used to establish the inventory's norms and standards. In addition, the development of the instrument as a whole is explored along with its reliability and validity.

There are two major reasons for using the *LAI*: (1) assessment of leader attributes at a point-in-time and (2) measurement of change in leader attributes for an

individual over time. Self-assessment is only the first step in point-in-time leader assessment. Self-assessments focus an individual's attention on the attributes that predispose one to desirable leader performance and establish developmental goals by pinpointing the leader attributes to be strengthened. Subsequent assessments by three to five subordinates (preferably) or peers then highlight discrepancies in perception. Knowledge of such discrepancies help ratees understand frictions in interpersonal relationships and motivate them to strengthen selected attributes, on the one hand, and help build self-confidence with improved performance, on the other.

Measuring change in leader attributes with the *LAI* is accomplished with multiple self-assessments only: one before a leadership development program and two after—one in which ratees rate themselves as they now perceive themselves to have been *before* beginning a leadership program such as NCRVE's *Preparing Leaders for the Future* curriculum (see "For Those About to Lead" on pages 6-8) and one (taken a few minutes after the first) in which ratees rate themselves as they *currently* perceive their attributes.

In addition to a copy of the *LAI* rating-by-observer form, a sample of an individualized feedback report, and raw-to-normalized-score conversion tables, the LAI *Manual* includes a copy of the *Leader Effectiveness Index* (*LEI*) and information about its development. The *LEI* is included because the authors contend that it "provides an important criterion measure used to estimate the validity of the *LAI*."

Explored in the Leader Effectiveness Index *Manual*, the *LEI* instrument itself is much shorter than the *LAI*. The *LEI* consists of seven items that assess the extent to which vocational education leaders facilitate group processes and empower group members generally and the extent to which they perform six broad tasks:

1. inspire a shared vision and establish standards that help the organization develop
2. foster unity, collaboration, and ownership as well as recognize individual and team contributions
3. exercise power effectively
4. exert influence outside of the organization in order to set the right context for the organization
5. establish an environment conducive to learning
6. satisfy the job-related needs of members of the organization as individuals

As in the *LAI*, attributes in the *LEI* are rated for an individual with a 6-point response scale, from "not effective" to "extremely effective." However, while the *LAI* provides a diagnostic assessment of the attributes that predispose an individual to desirable leader performance, the *LEI* measures the effectiveness of

Leadership behavior can be measured and shown to be related to effective performance

leader performance. Also like the *LAI*, the *LEI* can be used either for point-in-time assessment or for measuring changes in leader performance.

The *LEI* instrument can be completed in less than five minutes, and it is suggested, as with the *LAI*, that three to five subordinates or peers who know the ratee well be used as observer-raters. Unlike the *LAI*, including information about raters (e.g., gender, ethnic group, position) with the instrument is optional.

The *LEI* is supported by the same kind of research and rigorous development process that contributed to the development of the *LAI*. Information about the research and development process are included in the manual with special attention given to the process of establishing norms and standards for the index. A copy of the *LEI* instrument is appended with a sample individualized feedback report.

Leader Attributes Inventory *Manual* (MDS-730CA) and Leader Effectiveness Index *Manual* (MDS-815CA) were prepared by Jerome Moss, Jr., Judith J. Lambrecht, and Qetler Jensrud from the NCRVE site at the University of Minnesota and Curtis R. Finch from the NCRVE site at Virginia Polytechnic Institute and State University. (For ordering information, see page 12.)

ADMINISTRATIVE BREAKWATER
A Professional Development Simulation

Curtis R. Finch's *Breakers: An Organizational Simulation for Vocational Education Professionals* is unique among NCRVE publications. It contains all the materials users need to conduct an organizational simulation. In the simulation, participants play the roles of administrators (e.g., vice presidents and deans) responsible for the operation of Breakers Technical College, a postsecondary institution serving 10,000 full- and part-time students.

The *Breakers* materials include everything short of common office supplies required to conduct the nine- to twelve-hour simulation: guidelines for conducting the simulation, Breakers Technical College orientation materials, and materials for each of the ten administrative roles. Included in the guidelines are checklists and forms intended to assist those directing this highly interactive simulation, which allows participants to apply leadership knowledge and skills in various situations. Multiple simulations can be run simultaneously with one simulation director and three director's assistants per simulation along with enough individuals to fill the ten administrative roles.

The simulation, which was by accounts well-received in field tests, builds on NCRVE leadership research; personal interviews with vocational administrators from thirty-eight United States secondary and postsecondary

The *Breakers* simulation allows participants to apply leadership knowledge and skills in various situations

institutions; and additional interviews with groups of technical college, community college, and technical center administrators and instructors.

The "Conducting the Simulation" section of *Breakers* provides a brief outline of the simulation's organization and operation as well as checklists for before, during, and after the simulation; a list of materials; a guide for the simulation debriefing; samples of documents for administering the simulation; and information about the origination, distribution, and focus of the simulation-driving correspondence. The "Orientation Materials" section includes a sample simulation itinerary and information about Breakers Technical College.

The bulk of *Breakers* consists of correspondence—correspondence from within and from outside the college to administrators within the college who are the

Well-received in field tests, *Breakers* builds on NCRVE leadership research

key players in the simulation. In addition to copies of the correspondence that the respective administrators themselves have "sent" to others, administrators begin with copies of correspondence "sent" by other administrators in the theoretical time before the actual events of the simulations have taken place.

The situations that arise during the course of the simulation and with which participants must deal relate to special events; report findings; enrollment, student, curriculum, personnel, facilities, and program concerns; and public relations matters. The situations are introduced in the correspondence provided with the simulation materials and are addressed by participants during the course of the simulation.

Potential users of the *Breakers* materials, especially those who plan on running concurrent simulations, should be aware that *Breakers*—like all NCRVE publications—is in the public domain and is therefore free of copyright restrictions. Multiple copies of the materials may be made at the users discretion as long as NCRVE is acknowledged as their source.

Breakers: An Organizational Simulation for Vocational Education Professionals (MDS-278CA) was prepared by Curtis R. Finch from the NCRVE site at Virginia Polytechnic Institute and State University. (For ordering information, see page 12.)

IN CASES . . . .
Case Studies for Leadership Development

The collection of case studies included in *Case Studies in Vocational Education Administration: Leadership in Action* are intended to "fill a void." According to the authors of the collection—Curtis R. Finch, Cecil E. Reneau, Susan Faulkner, James A. Gregson, Victor Hernandez-Gantes, and Gayle A. Linkous, all of NCRVE's site at Virginia Polytechnic Institute and State University—case study textbooks for educational professionals in general and for vocational and technical education administrators in particular are rare. Yet, "Case studies have long been used by business and industry to cultivate and nurture critical leadership skills in key management personnel," according to the authors. "Similarly, other professions—in both public and private sectors of the workforce—have recognized the value of case studies and begun using them to facilitate the transfer of conceptual knowledge and understanding to situational applications."

These case studies are an extension of NCRVE leadership research and reflect the results of extensive field testing

The lack of "illustrative and illuminating" case studies focusing on the issues currently confronting vocational and technical education is the primary inspiration for *Case Studies*. "Such issues, indigenous to the vocational education profession" the authors contend, "cannot be adequately addressed by case studies written for other career groups."

The fifty-one case studies included in the collection are drawn from and build upon the results of the NCRVE publication entitled *Leadership Behaviors of Successful Vocational Education Administrators* (MDS-097CA, see page 12 for ordering information) and reflect the broad scope and complexity of organizational dynamics in vocational education. Collectively, the case studies are an educational resource thoughtfully designed to assist aspiring and practicing vocational education leaders "in achieving their greatest potential." Not only are the case studies an extension of vocational education leadership research, but they also reflect the results of an extensive, six-university review and field testing process.

The cases are organized into twelve functional groups, an arrangement that classifies the cases by common themes. While each case is assigned to only a single group, a number of them can be applied in more than one of the twelve areas. Below is a brief outline of the groups:

Group 1: Determining Institutional Direction, Goals, and Policies

Group 2: Participating in Accreditations and Evaluations

Group 3: Collaborating with Boards, Agencies, and Organizations

Group 4: Implementing Mandated Changes and Improvements

Group 5: Implementing Self-Selected Changes and Improvements

Group 6: Linking with Business, Industry, and the Community

Group 7: Enhancing Institutional Visibility and Image

Group 8: Maintaining and Improving Fiscal Posture

Group 9: Securing and Improving Facilities and Equipment

Group 10: Handling Crises

Group 11: Resolving Staff and Student Problems

Group 12: Participating in Individual and Group Discussions

The first two cases in each group are complete stories, describing an event or situation as it evolves. Thus, users see how a situation developed and how it was dealt with by an administrator. These cases more readily lend themselves to retrospective analyses. The remaining cases in each group are open-ended, bringing

readers to a point in a situation where they must consider what went wrong or what difficulty arose then decide what to do next. "These cases," according to the authors, "are most suitable for developing problem-solving and decision-making skills."

Each case study is two to four pages in length and includes a set of discussion questions that prompt participants to examine closely and think beyond the specific circumstances of the cases as presented.

The cases may be used in a variety of learning environments—from university classrooms to professional development workshops to institutional meetings. The introductory material of *Case Studies* provides some additional information about the logistics and pedagogical specifics of using the case studies for maximum effectiveness.

Case Studies in Vocational Education Administration: Leadership in Action (MDS-279CA) was prepared by Curtis R. Finch, Cecil E. Reneau, Susan Faulkner, James A. Gregson, Victor Hernandez-Gantes, and Gayle A. Linkous from the NCRVE site at Virginia Polytechnic Institute and State University. (For ordering information, see page 12.)

FOR THOSE ABOUT TO LEAD
A Leadership Development Curriculum

The focus of *Preparing Leaders for the Future: A Development Program for Underrepresented Groups in Vocational Education* by Jerome Moss, Jr., Sherry Schwartz, and Qetler Jensrud is to enhance, adapt, and cultivate leader attributes for effective performance in vocational education leadership roles. It is a response, as are the other NCRVE products reviewed in this issue of **Change Agent**, to a consensus among vocational educators that there is currently a pressing need for more high quality leaders and that the field has not, until recently, made an adequate effort to prepare them.

Recognizing the need for effective vocational education leaders, the NCRVE seeks to stimulate, facilitate, and evaluate educational interventions that effect positive change in selected leader attributes among potential and practicing leaders. The purpose of the *Preparing Leaders for the Future* program is to provide leadership development experiences specifically for women and other underrepresented groups in vocational education and to increase the likelihood that individuals in such groups will perceive opportunities to assume leadership roles, grasp those opportunities, and succeed as leaders in a wide range of situations and professional positions.

The *Preparing Leaders for the Future* program will prepare participants to seek out and take advantage of leadership opportunities

Given the strong relationship between the leader attributes assessed in NCRVE's *Leader Attributes Inventory* (see "The Right Instrument" on pages 9-10) and desirable performance as a leader and given the fact that many attributes can be significantly improved through formal instruction, the enhancement, adaptation, and cultivation of the leader attributes has been adopted as the instructional task and primary content base of the *Preparing Leaders for the Future* program, which is in fact a leadership development curriculum. Because most underrepresented groups have had limited opportunities to gain experience in leadership roles, the curriculum's designers decided that the curriculum should provide learning experiences in a wide range of leader attributes. Opportunities are provided for individuals to attain depth in those attributes they select, rather than experiences in a few predetermined attributes.

Prior NCRVE research on leadership programs for graduate students has shown that there is a high positive correlation between hours of directly supervised instruction and the number of leader attributes improved and that 90 hours of classroom instruction (the length of

the *Preparing Leader for the Future* curriculum) plus outside assignments is adequate to significantly affect a meaningful number of leader attributes and skills. However, the designers contend, even with 90 hours of class instruction, it is not reasonable for a program such as *Preparing Leaders for the Future* to attempt to improve all leader attributes of all participants. The

There is a high positive correlation between hours of directly supervised instruction and the number of leader attributes improved

designers of the curriculum, therefore, found it necessary to identify the particular attributes whose improvement would constitute the specific instructional objectives of the program.

Two sets of attributes were chosen. One set consists of fourteen attributes that best explain the variance in leader performance and/or that were consistently considered by former participants of leadership programs to have been most useful to them in their leadership activities. Included among the fourteen attributes are insightfulness, ability to motivate others, ability to make decisions, and ethicality.

As for the second set, although all successful leaders should demonstrate common attributes, individual differences tend to create particular strengths as well as developmental needs. Eleven attributes, the further development of which is likely to be helpful to most underrepresented groups, were identified using a literature review and the advice of individuals from underrepresented groups who have had experience conducting leadership development programs. Those attributes include tolerance of ambiguity and complexity, ability to manage conflict, tolerance of frustration, and ability to use appropriate leadership styles. These attributes, incidentally, also form the foundation for the objectives of the program.

The *Preparing Leaders for the Future* program is divided into three major sections: (1) "Introduction to the Leadership Development Program," (2) "Planning for Leadership Development," and (3) "Developing Leader Attributes." The "Introduction" section contains an orientation to the program and its processes, a view (from various perspectives) of vocational education system realities, and an introduction to group process skills used throughout the program. The "Planning for Leadership Development" section of the program includes an assessment phase (of life roles, personality type, and leader attributes) and a goal- and strategy-development phase (using mentors and formulating an individualized leadership development plan).

The first two sections set the stage for moving into the third and largest section of the curriculum, "Developing Leader Attributes." In developing the learning experiences of the program for the attributes selected, the program designers report, it became evident that a three-category scheme of leader attributes made pedagogical sense. Obvious interrelationships and mutual reinforcement among the attributes within each category were apparent. The major program section of "Developing Leader Attributes" is, therefore, organized into three phases: (1) personal characteristics, (2) interpersonal skills and characteristics, and (3) management knowledge and skills.

The *Preparing Leaders for the Future* program is intended to be customized for specific contexts and constituents. The various potential uses for it, according

The *Preparing Leaders for the Future* program will begin to provide participants with the knowledge and leadership skills necessary for effective performance

to its designers, imply the need for a flexible program structure in which each learning experience is focused on only one or two attributes and is relatively independent from other learning experiences. At the same time, the designers recognize that the most effective instruction (pedagogically speaking) is probably achieved when learning experiences take

advantage of the inherent interrelationships among attributes and the opportunities they may present for mutual reinforcement. According to the designers, therefore,

> The structure of the program tries to strike a reasonable balance between these alternatives. Each learning experience focuses on specific attributes so that it is possible to select particular learning experiences to achieve targeted outcomes. At the same time, learning experiences also try to make interrelationships among attributes evident where they exist, and assignments often try to provide practice on more than one attribute.

The nature of the program's content, with its intent to change personal characteristics and interpersonal skills, lends itself to the use of group-instruction techniques to create and take advantage of supportive groups of participants. Consequently, learning experiences are structured by the program designers for delivering common content to a group of participants. In order to provide for the unique needs of individual participants—made evident in the assessment and planning phases of the program—participants have been allowed to individualize assignments, and they are expected to undertake special long-term projects.

The structure of each learning experience in *Preparing Leaders for the Future* ensures that instruction focuses on changing performance. The program was designed with an eye to the practical matters of delivering curriculum. It is this specificity and practicality that make this two-volume program so valuable—and, to a certain extent, unique. Participants do not simply learn

NCRVE seeks to stimulate, facilitate, and evaluate educational interventions that effect positive change in selected leader attributes

about attributes; they are required to demonstrate respective behaviors. The definitions of the attributes are presented in behavioral terms and serve as the objectives of the various learning experiences. Each behavioral objective is then analyzed as a means for identifying the content to be taught. A lesson delivery plan is then created from the analysis to guide the instructor and maintain participants' focus on the respective objectives of instruction. Each lesson delivery plan then follows a set of common steps: content, method, and media are recommended for each

There is currently a pressing need for more high-quality leaders

step; for practice, assignments (some, long-term assignments) are provided that allow participants to demonstrate desired leadership behaviors. The materials for each learning experience also provide an estimate of the in-class and out-of-class time required to complete the experience, a list of necessary and optional instructional materials, and a list of optional activities.

In contrast—and in response—to these views, the *Preparing Leaders for the Future* program utilizes the assets of underrepresented groups in vocational education leadership roles to create positive change:

> It is not proposed that this program will eliminate the special challenges that underrepresented groups may encounter in attaining leadership positions due to discriminating practices and attitudes. It will, however, prepare participants to seek out and take advantage of leadership opportunities and will begin to provide participants with the knowledge and leadership skills necessary for effective performance.

Preparing Leaders for the Future: A Development Program for Underrepresented Groups in Vocational Education (MDS-736CA) was prepared by Jerome Moss, Jr., Sherry Schwartz, and Qetler Jensrud from the NCRVE site at the University of Minnesota. (For ordering information, see page 12.)

A SOURCE OF RESOURCES
Selecting & Applying Resources for Leadership Development

Included among the myriad other urgencies that sprouted from educational reform efforts of the last decade or so is the urgency to improve the preparation of educational leaders. *Vocational Education Leadership Development Resources: Selection and Application* by Curtis R. Finch, James A. Gregson, and Cecil E. Reneau—citing reports such as the National Commission on Excellence in Education's *Leaders for America's Schools*, which calls for a redefinition of educational leadership; the American Association of Colleges for Teacher Education's *School Leadership Preparation*, which presents a series of recommendations for reconceptualizing administrator preparation programs; and the National Policy Board for Educational Administration's *Improving the Preparation of School Administrators*—responds to the urgency by giving detailed information about leadership development resources to those responsible for developing vocational education leaders.

Vocational Education Leadership Development Resources provides detailed information about leadership development resources to those responsible for developing vocational education leaders

Such resources, necessarily designed to facilitate the development of leader attributes, "can often spell the difference between a substandard and a successful program," contends this NCRVE guide. As leadership programs are established or modified to meet the challenges posed by changes in education and as serious consideration is given to the organization, content, and delivery of these programs, attention must eventually and inevitably be paid to the selection and use of leadership development resources. When the attention of those responsible for developing vocational education leaders does focus on this important and ongoing aspect of leadership development, metaresources like *Vocational Education Leadership Development Resources* serve useful and practical roles.

Vocational Education Leadership Development Resources begins by developing a context for leadership development resources. It outlines a variety of "arrangements"—graduate degree programs; leadership academies; institution, organization, and agency programs; certification arrangements; leadership seminars; fellowships; and assessment centers—and addresses briefly the concerns faced by leadership development programs. Then, after establishing a foundation with respect to where resources like those listed in the guide might be used in the vocational education leadership development process, the guide discusses how the quality resources necessary can be selected.

The foundation that the authors establish for their collection is rooted in a framework that emphasizes the role of teamwork and is driven by a five-question planning paradigm of the leadership development process. This framework links leadership development with the resources that the development process utilizes, a process that is characterized by four phases:

Good resources often spell the difference between a substandard and a successful program

1. The foundation phase, which emphasizes development of knowledge
2. The bridging phase, which "bridges" the gap between foundational studies and field experience
3. The practicum phase, characterized by structured and monitored experiences in actual educational settings

4. The practice phase, in which individuals "learn on the job"

Each phase is typically associated with a specific set of resource types. These types are defined in *Vocational Education Leadership Development Resources* and addressed in terms of how they can be located:

- textbooks
- handbooks
- lectures and discussions
- self-assessments
- simulations
- case studies
- games
- shadowing
- interning
- externing
- mentoring
- induction

One of the two strengths of this publication are its valuable appendices, which include an annotated bibliography of leadership development resources and services, list of leadership development providers, and collection of leadership resources profiles.

The other strength of the guide is the "Assessment Form," developed by the authors with the assistance of a national panel of leadership development experts to uniformly assess leadership development resources of varying formats, emphases, and pedagogies. Specifically, the form is designed to assess the following with respect to a resource:

- organizational structure
- potential audience
- leader attributes addressed
- instructional settings in which it can be used
- instructional techniques employed
- media requirements
- phases of leadership development addressed
- its research base
- specific applicability to *vocational education* leadership development
- perceived cost-effectiveness
- strengths and limitations

For those in the process of developing or improving a vocational education leadership development program,

In the selection and use of leadership development resources, metaresources like this one serve useful and practical roles

the form itself—let alone its supporting material—is worth the publication's cost-recovery price. *Vocational Education Leadership Development Resources* defies unstructured, unarticulated, hit-and-miss resource selection.

Vocational Education Leadership Development Resources: Selection and Application (MDS-188CA) was prepared by Curtis R. Finch, James A. Gregson, and Cecil E. Reneau from the NCRVE site at Virginia Polytechnic Institute and State University. (For ordering information, see page 12.)

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